

Ground Water Monitoring 2006 Biennial Report

30057201



Superfund

Sullivan Landfill - Sullivan, Missouri

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TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	GROUND WATER SAMPLING	2
2.1	WELL PURGING ACTIVITIES	2
2.2	DECONTAMINATION PROCEDURES	3
2.3	SAMPLE COLLECTION PROCEDURES	4
2.4	QUALITY CONTROL SAMPLES	4
3.0	GROUND WATER POTENTIOMETRIC SURFACE GRADIENT	6
4.0	ANALYTICAL RESULTS	7
5.0	LANDFILL INSPECTION INFORMATION	8
6.0	SUMMARY	9

APPENDICES:

- A FIELD DATA SHEETS**
- B LABORATORY REPORT AND CHAIN-OF-CUSTODY FORMS**
- C LANDFILL INSPECTION REPORTS - FIRST QUARTER 2004
 THROUGH FIRST QUARTER 2006**

LIST OF TABLES

- 1 *Well Summary - April 26-27, 2006*
- 2 *Summary of Detected Analytes - April 26-27, 2006*
- 3 *Historic Summary of Detected Ground Water Analytes*

LIST OF FIGURES

- 1 *Site Location Map***
- 2 *Ground Water Potentiometric Surface Gradient Map - April 26, 2006***

1.0 INTRODUCTION

This report summarizes the ground water monitoring activities, which took place on April 26 and 27, 2006 at the closed Sullivan Landfill site located in Sullivan, Missouri. A Site Location Map is included as Figure 1. Environmental Resources Management (ERM), of St. Charles, Missouri, performed the ground water sampling activities. Ms. Candice McGhee from the Missouri Department of Natural Resources (MDNR) was also present to collect split ground water samples with ERM. Additionally, this report serves as documentation of quarterly landfill inspection activities for the period from First Quarter 2004 through First Quarter 2006, which was performed by City of Sullivan Water Department personnel.

2.0 GROUND WATER SAMPLING

This section describes the sampling procedures used to collect the ground water samples. It describes the well purging activities, decontamination procedures, sample collection procedures, and quality control samples.

In a letter dated February 29, 2000, that outlined post-closure ground water monitoring requirements for the landfill, the MDNR requested some alterations to the historical sampling program in anticipation of the approval of the post-closure monitoring program for the landfill. The post-closure ground water monitoring requirements indicated that sampling frequency for the wells could be reduced from annual to biennial. The analyte lead was added to the parameter list, and inorganic samples were to be analyzed for dissolved parameters. The monitoring wells MW102A, MW102B, and B201 were no longer required to be sampled, and MW104 was included as a sampling point. This biennial ground water monitoring program was included with the landfill closure plan that was filed with the Franklin County Recorder of Deeds on September 6, 2000.

2.1 WELL PURGING ACTIVITIES

There are seven ground water monitoring wells currently surrounding the landfill. There is also a ground water production well located near the landfill designated as the "Voss Well". The locations of these wells are shown on Figure 2. Table 1 displays a summary of the well numbers and applicable physical measurements.

Ground water sampling activities were generally conducted in accordance with methodologies presented in the March 1994 Ground Water Monitoring Plan (the Work Plan) prepared by ABB Environmental Services, Inc. (ABB) of Portland, Maine, and approved by the MDNR.

Prior to well purging, depth to water measurements were collected from the monitoring wells (Table 1) and the casing volume of each well to be sampled was calculated. The Voss Well has a permanent pump and is sealed, so no water level reading was collected from this well.

As described in the Work Plan, some of the wells will not accept a submersible Grundfos pump. Therefore, in order to use a consistent method of purging and sampling for all of the wells, purging of the

ground water monitoring wells was completed with dedicated PVC bailers. The bailers were lowered and raised with an electric motor operated outrigger unit. A stainless steel line was connected to the bailers and they were lowered approximately 10 feet below the water surface before retrieval.

The Voss well is fitted with an automatic chlorination device, therefore, prior to purging, the chlorinator was turned off. The well was then purged until approximately 200 gallons had been removed.

Ground water from the monitoring wells was tested, after approximately each full casing volume was removed, for the following field-measured parameters: pH, temperature, specific conductance, and turbidity. These readings were recorded on Field Data Sheets, which are included as Appendix A. As described in the Work Plan, if two well volumes have been removed and field-measured parameters (except turbidity) have stabilized within 10%, the well is considered purged and may be sampled. As shown in the Field Data Sheets, the field-measured parameters for all of the monitoring wells were generally stable after two casing volumes had been removed, however three casing volumes were generally removed before sampling.

According to the Work Plan, the Voss Well is considered to be purged after it is allowed to run for a minimum of 10 minutes. During this sampling event it was allowed to run for approximately 30 minutes prior to sample collection since it was allowed to purge at a relatively slow rate. The purge rate was set low to avoid excessive ponding of water where the purge water was discharged. Field-measured parameters were collected from the Voss Well just before sample collection and were recorded on a Field Data Sheet (see Appendix A).

Purge water from all the wells, except the Voss Well, was disposed of in the city of Sullivan sanitary sewer, as approved by the MDNR project manager for this site. Purge water from the Voss Well was allowed to discharge on the ground, in accordance with the Work Plan.

2.2 DECONTAMINATION PROCEDURES

Dedicated bailers were used in all of the monitoring wells. Each bailer is stored by hanging it within the individual wells. The stainless steel line used to retrieve bailers was decontaminated between wells with an Alconox detergent and distilled water solution followed by a distilled water rinse.

2.3 SAMPLE COLLECTION PROCEDURES

Samples were collected from each well for volatile organic compounds (VOCs) and dissolved barium, chromium, and lead.

Laboratory-supplied containers that had been pre-preserved were used for sample collection. Following sample collection, the containers were stored on ice in an insulated cooler.

Ms. Candice McGhee, with the MDNR, collected split samples with ERM for VOCs. Generally, ERM and the MDNR took turns filling sample containers at each location until all sample containers were full.

Samples from the monitoring wells were collected directly from the bailers used to purge the wells. Samples collected for inorganic analysis were initially placed in a clean unpreserved container and then field filtered into a laboratory-supplied pre-preserved container. Field filtering was conducted using a peristaltic pump, using clean tubing and 0.45 micron filters for each well sampled.

At the Voss Well, the ground water samples were collected directly from the well spigot.

2.4 QUALITY CONTROL SAMPLES

A trip blank was included for field sampling quality control purposes. The trip blank consisted of a laboratory-supplied sample for VOCs only, which accompanied the sample containers to the field, during storage, and during delivery to the analytical laboratory.

The laboratory analyzed a method blank and a laboratory control sample (LCS) for quality control (QC) purposes. The method blank sample consisted of a laboratory grade water blank analyzed for VOCs, barium, chromium, and lead. The laboratory control sample consisted of a laboratory grade water blank spiked with a known quantity of VOCs, barium, chromium, and lead. The control sample was then analyzed and a percent recovery value calculated based on the amount of VOCs, barium, chromium, and lead detected as compared to the amount with which the sample was spiked.

All VOC compounds analyzed in the method blank were not detected above laboratory reporting limits. Barium was detected in the method blank above instrument detection limit, but below the laboratory reporting limit.

The LCS and laboratory control sample duplicate (LSCD) samples had controlled spike recoveries within approved laboratory QC limits for all parameters except for dichlorofluoromethane, vinyl chloride, and trichlorofluoromethane. The relative percent difference (RPD) between LCS and LCSD samples exceeded laboratory QC limits for these parameters. Parameters exceeding the RPD between LCS and LCSD samples could have less accurate reporting levels. However, there are no maximum contaminant levels (MCLs) for dichlorofluoromethane and trichlorofluoromethane, and vinyl chloride was not detected above the laboratory reporting limit in any of the ground water samples analyzed.

3.0 GROUND WATER POTENTIOMETRIC SURFACE GRADIENT

On April 26, 2006 a round of water level measurements was collected from the all of the monitoring wells at the site. The depth-to-water measurements and ground water elevations are shown in Table 1.

The water level elevations for MW-101, MW-102B, MW-103, MW-104, and MW-105 were used in the construction of the Apparent Ground Water Potentiometric Surface Gradient Map (see Figure 2). These five wells were chosen because the bottom elevations of these wells are similar. As shown in Figure 2, the apparent horizontal ground water potentiometric surface gradient is trending to the north-northeast based on the measurements collected on April 26, 2006. The apparent horizontal ground water potentiometric surface gradient is similar to that shown during the last biennial monitoring event in May 2004.

However, it has also been observed that the ground water levels in the monitoring wells appear to correlate with the elevation at which the base of each well is set (e.g., lower elevation heads in lower base of well elevation locations [MW-103] and higher elevation heads in higher base of well elevation locations [MW-105]). Therefore, the ground water head elevation appears to be influenced by the elevation at which the well base was set, which may affect the ground water gradient and its trend toward the north-northeast as shown in Figure 2. This observation is supported by the noted difference in head between MW-102B and MW-102A, that the ground water flow gradient at the Site may also have a downward vertical component.

4.0 ANALYTICAL RESULTS

The ground water samples were hand delivered by ERM to Severn Trent Laboratories (STL) in St. Louis, Missouri, who shipped the samples to the STL laboratory in Chicago, Illinois for analysis. The samples were held, transported, and delivered following strict chain-of-custody procedures.

The collected samples were analyzed for VOCs by Method 8260B, and dissolved barium, chromium, and lead by Method 6010B. The laboratory analytical report and completed chain-of-custody forms are included as Appendix B.

A summary of detected VOCs and inorganic analytes is attached as Table 2.

Six VOCs were found above laboratory detection limits: trichloroethene (TCE), 1,1-dichloroethane (1, 1-DCA), tetrachloroethene (PCE), methylene chloride, dichlorofluoromethane, and trichlorofluoromethane. TCE was detected at 2.4 ug/l in MW-101, 6.5 ug/l in MW-104, 2.4 ug/l MW-105 and 3.6 ug/l in the Voss Well. DCA was detected at 1.1 ug/l in MW-104, 6.9 ug/l in MW-105 and at 6.2 ug/l in the Voss Well. PCE was detected in well MW-103, MW-104, and the Voss Well at concentrations of 1.5 ug/l, 1.3 ug/l, and 1.2 ug/l, respectively. Dichlorofluoromethane was detected in wells MW-101, MW-103, MW-104, MW-105 and the Voss Well at concentrations of 2.1 ug/l, 6.7 ug/l, 4.3 ug/l, 3.2 ug/l, and 8.0 ug/l, respectively. Trichlorofluoromethane was detected in wells MW-101, MW-103, MW-104, MW-105 and the Voss Well at concentrations of 20 ug/l, 150 ug/l, 65 ug/l, 18 ug/l, and 93 ug/l, respectively. Additionally, methylene chloride was detected at 1.2 ug/l in the Voss Well. Methylene chloride was also detected in the trip blank at 5.2 ug/L.

Except for the previously described six compounds, all other VOCs were not detected above the laboratory method detection limits.

The analytical results for dissolved barium, chromium, and lead show that for all of the samples submitted, dissolved chromium and lead levels were below the instrument detection limit. Dissolved barium concentrations however, were detected in all five wells at estimated concentrations below the laboratory reporting limit of 200 ug/l.

5.0 LANDFILL INSPECTION INFORMATION

According to the post-closure monitoring requirements for the Sullivan Landfill as set forth by the MDNR and contained on the closure plan for the landfill filed with the Franklin County, Missouri Recorder of Deeds on September 6, 2000, semiannual visual inspections and maintenance, as necessary, are to be performed on the landfill. The landfill is typically mowed twice per year depending upon vegetation growth. Presently, personnel from the City of Sullivan Water Department perform these inspection and maintenance activities. Although the landfill is only required to be inspected twice per year, the City of Sullivan generally performs quarterly inspections of the landfill noting any need for maintenance and scheduling the completion of the maintenance activities, usually prior to the next quarter's inspection. City personnel complete a checklist to document their quarterly inspection and any maintenance activities. Enclosed in Appendix C are copies of the landfill inspection reports from First Quarter 2004 through First Quarter 2006. As can be seen in these inspection reports, only routine maintenance activities have been necessary at the landfill since First Quarter 2004.

6.0 SUMMARY

On April 26 and 27, 2006, ground water samples were collected for VOCs and dissolved barium, chromium, and lead from five wells around the Sullivan Landfill located in Sullivan, Missouri. During the sampling event, the MDNR split samples with ERM for VOCs. As described in Section 4.0 of this report, the analytes found at levels above the detection limit were TCE, 1,1-DCA, PCE, methylene chloride, dichlorofluoromethane, and trichlorofluoromethane. These analytes were found in several monitoring wells at varied concentrations as shown in Table 2. Methylene chloride was also detected in the trip blank. The concentrations of these VOCs found in the ground water samples are slightly above the detection limits of 1 ug/l and are below the MCLs promulgated by the U.S. Environmental Protection Agency (USEPA), except for the TCE concentration in MW-104. The TCE concentration in MW-104 was 6.5 ug/l, slightly above the USEPA MCL of 5.0 ug/l. The TCE present in the ground water sample collected from MW-104 is consistent with the concentration observed from the May 2004, biennial sampling event. The May 2004 sampling event result for TCE in MW-104 was 6.6 ug/l.

In order to provide a comparison to previous sampling results, a historical summary of detected VOCs, as well as total and dissolved barium, chromium, and lead from all previous sampling events has been included as Table 3. As shown in this table, the measurements in all of the wells have remained relatively consistent over time since sampling activities began.

An apparent ground water potentiometric surface gradient map was completed based on depth-to-water measurements collected on April 26, 2006 and indicates an apparent north-northeast trend with both vertical and horizontal gradients.

No outstanding inspection or maintenance issues appear to be present at the landfill in association with the quarterly inspection activities performed by the City of Sullivan. Additionally, during the performance of the 2006 biennial ground water sampling event, ERM did not notice any areas of concern associated with excessive vegetation, site security, site access, condition of the landfill cover, monitoring wells, or gas vents. In general, the landfill appears to be well maintained.

Tables

TABLE 1
WELL SUMMARY SULLIVAN LANDFILL SAMPLING ⁽¹⁾
April 26 & 27, 2006
SULLIVAN, MISSOURI

Well	TOC Elevation ⁽²⁾	Depth-to-Water from TOC	Ground Water Elevation ⁽²⁾	Total Well Depth from TOC	Total Boring Depth from Ground Surface	Base of Well Elevation ⁽²⁾	Formation Screened
MW-101	887.08	161.57	725.51	185	243	702.08	Gasconade
MW-102A	895.5	183.65	711.85	275	283	620.5	Gasconade
MW-102B	896.01	171.67	724.34	210	214	686.01	Gasconade
MW-103	878.46	181.33	697.13	208	243	670.46	Gasconade
MW-104	898.95	179.34	719.61	202	205	696.95	NC
MW-105	881.69	144.68	737.01	177	203	704.69	Gasconade
B-201	NC	13.60	NC	20.2	17.5	NC	Roubidoux
Voss	NC	NC	NC	NC	NC	NC	NC

NOTES: ⁽¹⁾ All measurements are expressed in feet.

⁽²⁾ Elevations are based on the North American Vertical Datum of 1988.

KEY: TOC = Top of casing.

NC = Not collected.

TABLE 2

SUMMARY OF DETECTED ANALYTES
April 26 & 27, 2006
CITY OF SULLIVAN LANDFILL
SULLIVAN, MISSOURI

	CAS No.	MCL ⁽¹⁾ ($\mu\text{g/L}$)	Reporting Limit ($\mu\text{g/L}$)	Sample Number					
				MW-101 ($\mu\text{g/L}$)	MW-103 ($\mu\text{g/L}$)	MW-104 ($\mu\text{g/L}$)	MW-105 ($\mu\text{g/L}$)	Voss ($\mu\text{g/L}$)	Trip Blank ($\mu\text{g/L}$)
Volatile Organic Analytes⁽²⁾									
1,1,1-Trichloroethane	71-55-6	200	1.0	--	--	--	--	--	--
1,1-Dichloroethane	1717-00-6	(3)	1.0	--	0.78 J	1.1	6.9	6.2	--
1,1-Dichloroethene	75-35-4	7	1.0	--	0.57 J	--	--	--	--
1,2-Dichloroethane	107-06-2	5	1.0	--	--	--	--	--	--
1,2-Dichloroethene	540-59-0	70	1.0	0.69 J	--	0.60 J	--	--	--
2-Butanone (MEK)	78-93-3	(3)	5.0	--	--	--	--	--	--
4-Methyl-2-pentanone (MIBK)	108-10-1	(3)	5.0	--	--	--	--	--	--
Acetone	67-64-1	(3)	5.0	--	--	--	--	--	--
Bromodichloromethane	75-27-4	(3)	1.0	--	--	--	--	--	--
Bromoform	75-25-2	(3)	1.0	--	--	--	--	--	--
Carbon disulfide	75-15-0	(3)	5.0	--	--	--	--	--	--
Chlorobenzene	108-90-7	100	1.0	--	--	--	--	--	--
Chloroform	67-66-3	(3)	1.0	--	--	--	--	--	--
cis-1,2-Dichloroethene	156-59-2	5	1.0	--	--	--	--	--	--
Dibromochloromethane	124-48-1	(3)	1.0	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	(3)	1.0	2.1 *	6.7 *	4.3 *	3.2 *	8.0 *	--
Dichlorofluoromethane	75-43-4	(3)	1.0	NA	NA	NA	NA	NA	NA
Methylene Chloride	75-09-2	5	1.0	--	--	--	--	1.2	5.2
methyl t-butyl ether	1634-04-4	(3)	1.0	--	0.78 J	--	--	--	--
Tetrachloroethene	127-18-4	5	1.0	--	1.5	1.3	--	1.2	--
Toluene	108-88-3	1,000	1.0	--	--	--	--	--	--
Trichloroethene	79-01-6	5	1.0	2.4	0.63 J	6.5	2.4	4.0	--
Trichlorofluoromethane	75-69-4	(3)	1.0	20 *	150 *	65 *	18 *	93 H *	--
Inorganic Analytes⁽³⁾									
Dissolved Barium	7440-39-3	2000	200	53	57	82	120	94	NA
Dissolved Chromium	7440-47-3	100	10	--	1.6 B	--	--	--	NA
Dissolved Lead	7439-92-1	15	5	--	--	--	--	--	NA

NOTES:

(1) Results expressed in $\mu\text{g/L}$.

(2) U.S. Environmental Protection Agency maximum contaminant level.

(3) No MCL is associated with this compound.

KEY:

-- = Not Detected

B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.

J = Estimated value (Organics Only).

NA = Not Analyzed

* = Batch quality control exceeds the upper or lower control limits.

H = Batch quality control is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.

TABLE 3
MW-101
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

Page 1 of 5

Volatile Organic Compounds (ug/l)	CAS No.	Sample Event																	
		5/23/1992	7/22/1992	2/13/1993	8/30/1993	5/24/1994	9/6/1994	3/24/1995	6/28/1995	9/15/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/29/1999	5/22/2000	5/14/2002	5/26/2004	4/26/2006
1,1,1-Trichloroethane	71-55-6	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39 J	--	--	--	
1,1-Dichloroethane	1717-00-6	--	--	--	--	--	--	--	--	--	--	--	0.28 J	0.35 J	--	--	--	--	
1,1-Dichloroethene	75-35-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,2-Dichloroethane	107-06-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1,2-Dichloroethene	540-59-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
2-Butanone (MEK)	78-93-3	--	--	--	--	--	--	--	--	--	--	3 J	--	--	--	--	--	--	
4-Methyl-2-Pentanone (MIBK)	108-10-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41 J	--	--	
Acetone	67-64-1	--	--	--	--	--	--	--	--	--	--	--	4 J,B	--	--	1.4 J,B	--	--	
Bromodichloromethane	75-27-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Bromoform	75-25-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Carbon disulfide	75-15-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chlorobenzene	108-90-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloroform	67-66-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29 J	--	0.69 J	
Dibromochloromethane	124-48-1	--	--	3.3 J	2.2	--	--	--	--	--	--	NA	NA	NA	--	--	--	--	
Dichlorodifluoromethane	75-71-8	NA	NA	--	--	--	2.1	1.9	3	4.9	4.8	NA	NA	NA	NA	NA	NA	2.1 *	
Dichlorofluoromethane	75-43-4	NA	NA	30	26	18.6	23.7	16.3	19.4	22.5	39.8	25.5	NA	NA	NA	NA	NA	NA	
Methylene Chloride	75-09-2	--	--	--	--	--	--	--	--	--	--	--	1 J,B	0.19 J	--	0.44 J,B	--	--	
methyl t-butyl ether	1634-04-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tetrachloroethene	127-18-4	--	--	--	--	--	--	--	--	--	--	--	--	0.33 J	0.36 J	--	--	--	
Toluene	108-88-3	--	--	--	--	--	--	--	1.8	--	--	--	--	--	0.12 J	--	--	--	
Trichloroethene	79-01-6	4	--	--	4.2	1.9	3.7	2.1	2.2	3.7	4.1	3.2	--	3 J	2.3	3.8	1.2	1.4	2.4
Trichlorofluoromethane	75-69-4	NA	NA	51	31	26.2	43.8	26.8	24.8	32.4	42.3	32.9	NA	NA	NA	NA	NA	NA	20 *
Inorganic Analytes (total) (ug/l)	CAS No.																		
Barium	7440-39-3	90	--	NA	NA	52	53	56	51	53	58	63	61.1	67 B	--	NA	NA	NA	NA
Chromium	7440-47-3	--	--	NA	NA	--	--	--	--	--	--	--	--	4.5 B	39	NA	NA	NA	NA
Lead	7439-92-1	10	8	NA	NA	--	--	--	--	--	--	--	--	NA	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)	CAS No.																		
Barium	7440-39-3	NA	NA	--	53	60	58	64	57	56	55	54	NA	NA	NA	--	62.1 B	57.7 B	53
Chromium	7440-47-3	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--
Lead	7439-92-1	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--

KEY:

-- = Not Detected

B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.

B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.

J = Estimated value (Organics Only).

NA = Not Analyzed

* = Batch quality control exceeds the upper or lower control limits.

H = Batch quality control is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.

TABLE 3
MW-103
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

Page 2 of 5

Volatile Organic Compounds (ug/l)	CAS No.	Sample Event																							
		5/20/1992	7/22/1992	2/11/1993	8/30/1993	5/24/1994	9/6/1994	3/29/1995	6/28/1995	9/28/1995	12/18/1995	5/3/1996	6/24/1997	7/23/1998	6/30/1999	5/23/00	5/13/2002	5/26/2004	4/27/2006						
1,1,1-Trichloroethane	71-55-6	--	--	--	--	1.1	1.4	1.3	1.1	1.4	1.9	1	--	2	J	2	0.82	J	0.82	J	--	--			
1,1-Dichloroethane	1717-00-6	--	--	--	--	--	--	--	--	--	--	--	--	0.38	J	--	0.39	J	0.35	J	0.78	J			
1,1-Dichloroethene	75-35-4	--	--	--	--	--	--	--	--	--	--	--	--	0.32	J	--	--	--	0.57	J	--	--			
1,2-Dichloroethane	107-06-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
1,2-Dichloroethene	540-59-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
2-Butanone (MEK)	78-93-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
4-Methyl-2-Pentanone (MIBK)	108-10-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.9	J	--	--	--			
Acetone	67-64-1	--	--	--	--	--	--	--	--	--	--	--	--	4	J,B	--	--	--	--	--	--	--			
Bromodichloromethane	75-27-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Bromoform	75-25-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Carbon Disulfide	75-15-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4	--	--	--	--			
Chlorobenzene	108-90-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Chloroform	67-66-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Dibromochloromethane	124-48-1	--	--	--	--	--	--	--	--	--	--	--	--	NA	NA	--	--	--	--	--	--	--			
Dichlorodifluoromethane	75-71-8	NA	NA	--	--	4.7	3.6	7.7	6	6.1	7.5	10.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7 *			
Dichlorofluoromethane	75-43-4	NA	NA	--	5.6	24.4	37.5	43.3	42	54.2	88.8	74.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Methylene Chloride	75-09-2	--	--	--	--	--	--	--	--	--	--	--	--	35	B	0.55	J	--	0.76	J,B	--	--			
methyl (-butyl) ether	1634-04-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78 J			
Tetrachloroethene	127-18-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	0.7	J	0.73	J	I	1.5			
Toluene	108-88-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Trichloroethene	79-01-6	--	--	--	--	--	--	--	--	--	--	--	--	--	1	J	0.5	J	--	0.55	J	0.44	J	0.63	J
Trichlorofluoromethane	75-69-4	NA	NA	--	5.6	24.4	37.5	43.3	42	54.2	88.8	74.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	150		
Inorganic Analytes (total) (ug/l)	CAS No.																								
Barium	7440-39-3	NA	--	--	NA	52	48	52	48	54	56	54	57.1	B	117	B	--	NA	NA	NA	NA	NA	NA		
Chromium	7440-47-3	NA	70	70	NA	--	--	--	--	--	--	--	--	17.4	B	12.0	NA	NA	NA	NA	NA	NA	NA		
Lead	7439-92-1	NA	10	160	NA	--	--	198	119	119	119	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Inorganic Analytes (dissolved) (ug/l)	CAS No.																								
Barium	7440-39-3	NA	NA	NA	NA	50	52	55	58	51	90	53	58	NA	NA	NA	--	58.6	B	58.6	B	57			
Chromium	7440-47-3	NA	NA	NA	NA	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--	--	--			
Lead	7439-92-1	NA	NA	NA	NA	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--	--	--			

KEY:

-- = Not Detected

B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.

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TABLE 3
MW-104
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

Page 3 of 5

Volatile Organic Compounds (ug/l)	CAS No.	Sample Event							
		5/23/1992	7/22/1992	2/13/1993	8/30/1993	5/23/2000	5/14/2002	5/26/04	4/27/06
1,1,1-Trichloroethane	71-55-6	--	--	--	--	0.4 J	1 J	--	--
1,1-Dichloroethane	1717-00-6	--	--	--	--	0.4 J	0.8 J	0.88 J	1.1
1,1-Dichloroethene	75-35-4	--	--	--	--	--	--	--	--
1,2-Dichloroethane	107-06-2	--	--	--	--	--	--	--	--
1,2-Dichloroethene	540-59-0	--	--	--	--	--	--	--	--
2-Butanone (MEK)	78-93-3	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	108-10-1	30 J	--	--	--	--	--	0.48	--
Acetone	67-64-1	4 J	--	--	--	0.9 J	1.4 J,B	--	--
Bromodichloromethane	75-27-4	--	--	--	--	--	--	--	--
Bromoform	75-25-2	--	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	--	--	--	--	--	--	3.50	--
Chlorobenzene	108-90-7	--	--	--	--	--	--	--	--
Chloroform	67-66-3	--	--	--	--	--	0.2 J	0.23 J	--
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	0.6 J	0.51 J	0.60 J
Dibromochloromethane	124-48-1	NA	NA	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	NA	NA	--	--	NA	NA	NA	4.3 *
Dichlorofluoromethane	75-43-4	NA	NA	--	--	NA	NA	NA	NA
Methylene Chloride	75-09-2	--	--	--	--	--	0.4 J,B	--	--
methyl t-butyl ether	1634-04-4	--	--	--	--	--	--	--	--
Tetrachloroethene	127-18-4	--	--	--	--	0.49	1.1	1.10	1.3
Toluene	108-88-3	--	--	--	--	--	--	--	--
Trichloroethene	79-01-6	4 J	--	--	--	4.3	6.8	6.60	6.5
Trichlorofluoromethane	75-69-4	NA	NA	89	58	NA	NA	NA	65 *
Inorganic Analytes (total) (ug/l)	CAS No.								
Barium	7440-39-3	NA	--	NA	NA	NA	NA	NA	NA
Chromium	7440-47-3	NA	60	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	NA	60	NA	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)	CAS No.								
Barium	7440-39-3	70	NA	--	56	--	90 B	75.1 B	82
Chromium	7440-47-3	--	NA	--	--	--	--	--	--
Lead	7439-92-1	--	NA	--	3.1	--	--	--	--

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TABLE 3
MW-105
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

Page 4 of 5

Volatilé Organic Compounds (ug/l)	CAS No.	Sample Event																	
		5/24/1992	7/22/1992	2/2/1993	8/30/1993	5/24/1994	9/6/1994	3/29/1995	6/28/1995	9/22/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/29/1999	5/23/2000	5/13/2002	5/26/2004	4/26/2006
1,1,1-Trichloroethane	71-55-6	5	--	--	--	9.4	9.6	8.9	7.1	6.2	3.6	1.7	--	3 J	2.5	1.1	0.8 J	--	--
1,1-Dichloroethane	1717-00-6	21	--	27	--	8.0	11.7	11.5	10.1	12.5	8.1	17.1	--	12	13	8.0	7.6	8.60	6.9
1,1-Dichloroethene	75-35-4	--	--	--	--	--	--	--	--	--	--	--	--	1 J	0.9 J	0.2 J	--	0.73 J	--
1,2-Dichloroethane	107-06-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19 J	--
1,2-Dichloroethene	540-59-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	78-93-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	108-10-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47 J	--
Acetone	67-64-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.4 B	--	--
Bromodichloromethane	75-27-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	75-25-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.70	--
Chlorobenzene	108-90-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3 J	0.35 J	--
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 J	0.47 J	--
Dibronochloromethane	124-48-1	--	--	--	23 J	--	--	--	--	--	--	--	--	NA	NA	--	--	--	--
Dichlorodifluoromethane	75-71-8	NA	NA	--	--	2.7	--	4.4	2.3	2.8	3.6	7.7	NA	NA	NA	NA	NA	NA	3.2 *
Dichlorofluoromethane	75-43-4	NA	NA	320	120	84.1	114	121	88.8	104	114	28.9	NA						
Methylene Chloride	75-09-2	3 J	--	--	--	--	--	--	--	--	--	--	--	2 J,B	0.7 J	0.4 J	0.9 J,B	--	--
methyl t-butyl ether	1634-04-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	127-18-4	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6 J	0.7 J	0.6 J	0.62 J	--
Toluene	108-88-3	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--
Trichloroethene	79-01-6	6	--	--	--	2.5	4.3	3.6	2.6	5.4	2.9	4.8	--	4 J	3.9	3.0	2.5	--	2.4
Trichlorofluoromethane	75-69-4	NA	NA	89	--	31	50.6	44.2	29.5	26.7	25.6	197	NA	NA	NA	NA	NA	NA	18 *
Inorganic Analytes (total) (ug/l)	CAS No.																		
Barium	7440-39-3	300	120	NA	NA	152	123	136	121	129	139	160	158 B	144 B	--	NA	NA	NA	NA
Chromium	7440-47-3	30	--	NA	NA	--	--	--	--	--	--	--	--	1.5 B	--	NA	NA	NA	NA
Lead	7439-92-1	120	50	NA	NA	--	--	--	--	--	--	5.8	--	NA	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)	CAS No.																		
Barium	7440-39-3	NA	NA	120	120	--	139	153	136	131	145	173	NA	NA	NA	--	143 B	119 B	120
Chromium	7440-47-3	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--
Lead	7439-92-1	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--

KEY:

-- = Not Detected

B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.

B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.

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TABLE 3
VOSS WELL
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

Page 5 of 5

Volatile Organic Compounds (ppb)	CAS No.	Sample Event															
		2/12/1993	8/31/1993	5/24/1994	9/6/1994	3/29/1995	6/28/1995	9/22/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/30/1999	5/23/2000	5/14/2002	5/26/2004	4/26/2006
1,1,1-Trichloroethane	71-55-6	--	--	1.7	1.7	1.5	1.6	1.5	1.8	1.6	--	2 J	1.9	1.2 J	1.5	--	--
1,1-Dichloroethane	1717-00-6	--	--	1.9	2.0	2.3	3.1	2.6	3.1	3.5	--	4 J	5.2	3.6	5.5	5.0	6.2
1,1-Dichloroethene	75-35-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	107-06-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	540-59-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (MEK)	78-93-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	108-10-1	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59 J	--	--
Acetone	67-64-1	--	--	--	--	--	--	--	--	--	--	--	--	--	6.3 B	--	--
Bromodichloromethane	75-27-4	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38 J	--	--
Bromoform	75-25-2	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44 J	--	--
Carbon Disulfide	75-15-0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	--	--	--	--	--	--	--	--	--	--	--	--	--	0.89 J	0.19 J	--
cis-1,2-Dichloroethene	156-59-2	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24 J	0.28 J	--
Dibromochloromethane	124-48-1	--	--	--	--	--	--	--	--	--	NA	NA	0.11 J	--	--	--	--
Dichlorodifluoromethane	75-71-8	NA	--	3.9	3.8	4.7	5.2	5.7	7	8.7	NA	NA	NA	NA	NA	NA	8.0 *
Dichlorofluoromethane	75-43-4	150	19 J	70	66.7	76.7	97.4	80.8	161	192	NA	NA	NA	NA	NA	NA	--
Methylene Chloride	75-09-2	--	--	--	--	--	--	--	--	--	--	2 J,B	0.85 J	--	0.99 J,B	0.61 J	1.2
methyl t-butyl ether	1634-04-4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	127-18-4	--	--	--	--	--	--	--	--	--	8	1 J	1	0.93 J	1.2	1.1	1.2
Toluene	108-88-3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	79-01-6	--	--	2.5	2.4	2.8	2.7	2.8	3.1	3.4	--	3 J	2.6	1.6 J	3.3	3.6	4.0
Trichlorofluoromethane	75-69-4	120	15 J	73.9	--	70.1	90.3	81.4	88.7	92.7	NA	NA	NA	NA	NA	NA	93 H,*
Inorganic Analytes (I) (ug/l)	CAS No.																
Barium	7440-39-3	NA	NA	76	82	82	69	83	83	85	88.2 B	83 B	--	NA	NA	NA	NA
Chromium	7440-47-3	NA	NA	--	--	--	--	--	--	--	--	--	--	NA	NA	NA	NA
Lead	7439-92-1	NA	NA	--	--	--	--	--	--	--	--	--	--	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)	CAS No.																
Barium	7440-39-3	90	76	78	91	93	78	85	86	96	NA	NA	NA	--	94.8 B	97.7 B	94
Chromium	7440-47-3	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--	--

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B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.

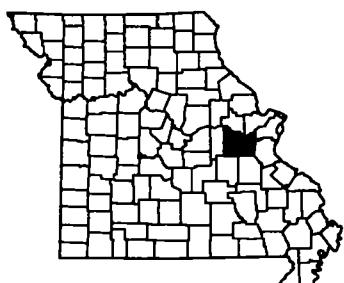
J = Estimated value (Organics Only).

NA = Not Analyzed

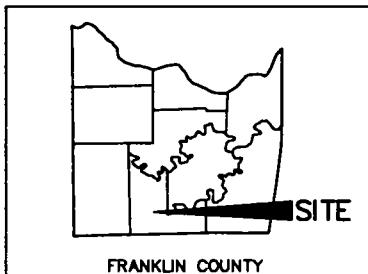
* = Batch quality control exceeds the upper or lower control limits.

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Figures



MISSOURI

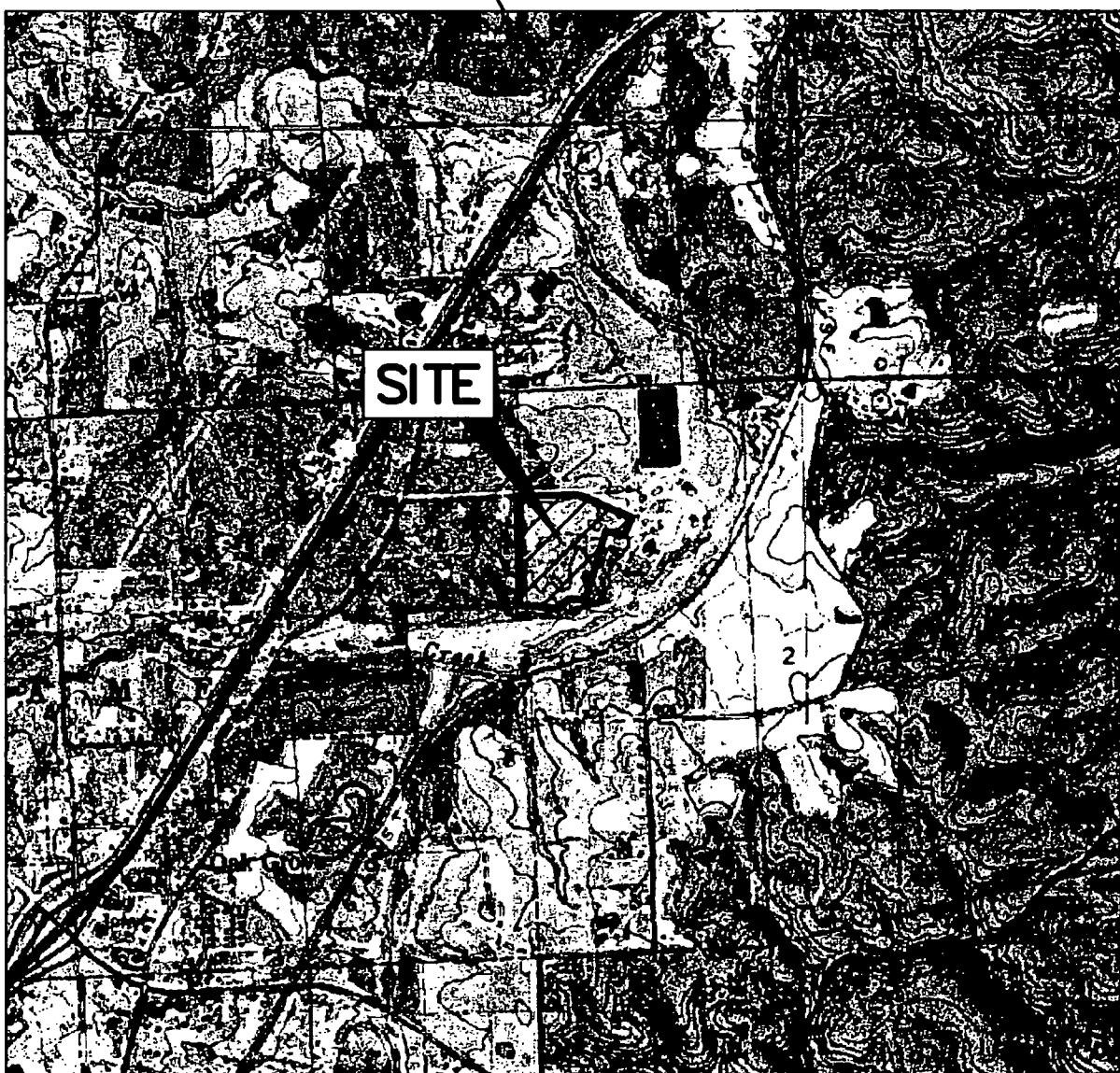


FRANKLIN COUNTY



SECTION 3
T.40N./R.2W.
MERAMEC TOWNSHIP
FRANKLIN COUNTY, MISSOURI

0 2000
SCALE (IN FEET)



SITE LOCATION MAP

ADAPTED FROM USGS
SULLIVAN QUAD, 1969/PR 1980

REVISIONS ARE TO BE MADE ON THE CADD FILE ONLY



SULLIVAN LANDFILL
EMMA LANE
SULLIVAN, MISSOURI

CADD Review GML

CHK'D DW-StC

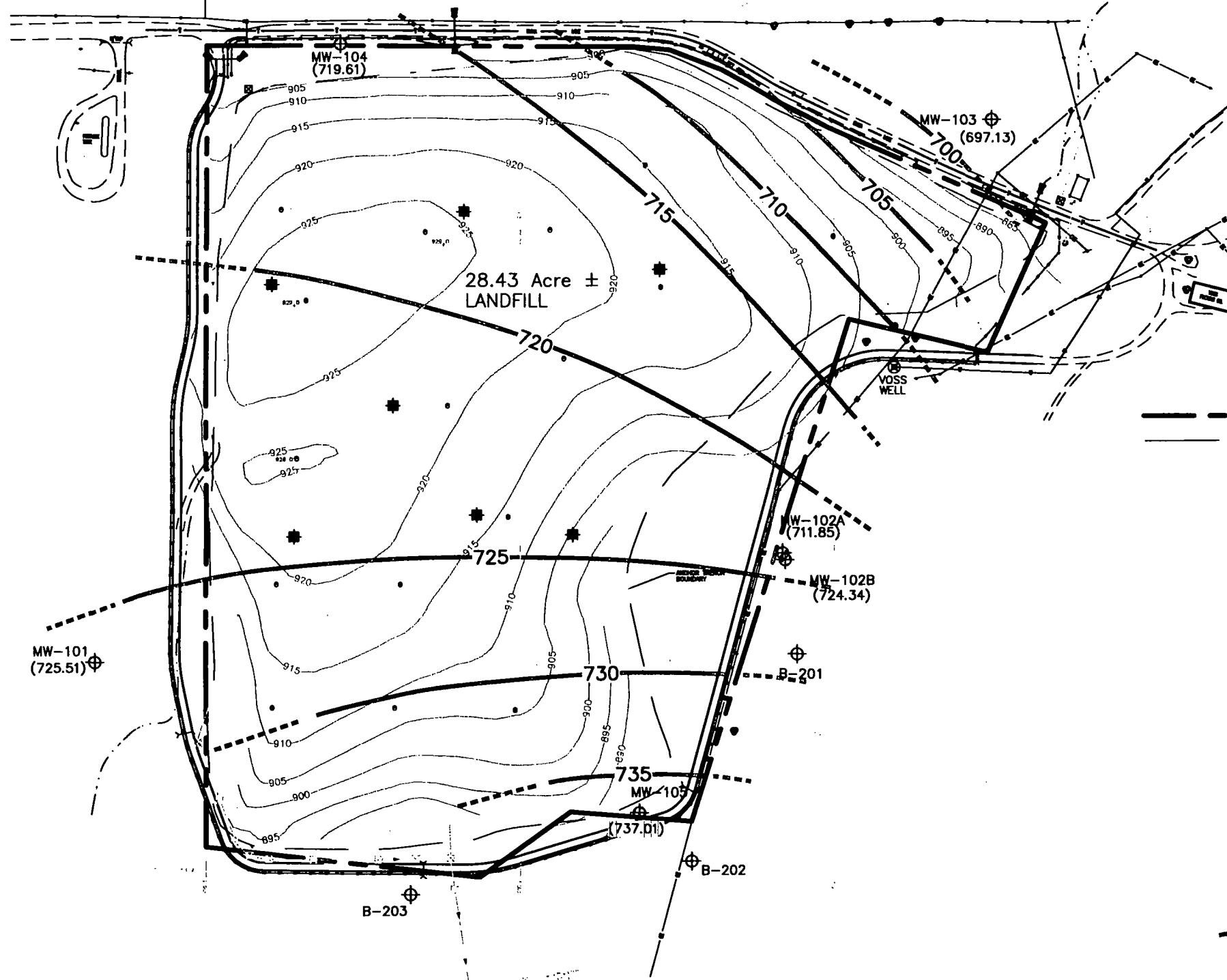
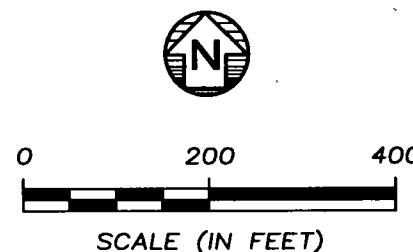
0046760

Drawn By
RMK 08/01/06

Environmental Resources Management

FIGURE 1

APPARENT GROUND WATER POTENTIOMETRIC SURFACE GRADIENT



- LEGEND**
- PROPERTY BOUNDARY
 - GEOMEMBRANE ANCHOR TRENCH BOUNDARY
 - CULVERT PIPE
 - DITCH CENTERLINE
 - CHAIN LINK FENCE
 - CHAIN LINK FENCE GATE
 - FINISH GRADE CONTOUR
 - STONE RIPRAP INLET/OUTLET PROTECTION
 - PERIMETER DRAIN OUTLET
 - 4" PERFORATED HDPE TRENCH DRAIN
 - 4" PVC TRENCH DRAIN
 - GAS VENT LOCATION (16 TOTAL)
 - MANHOLE
 - UTILITY POLE
 - OVERHEAD ELECTRIC
 - CHECK VALVE PIT
 - CLEANOUT
 - BUMPER POSTS @ GROUNDWATER MONITORING WELLS
 - SETTLEMENT PLATFORM LOCATION (7 TOTAL)
- 735— GROUND WATER CONTOUR
(719.61) GROUND WATER ELEVATION**

Drawn By
RMK
CADD Review
GML
Date Drawn/Rev'd
07/31/2006



SULLIVAN LANDFILL
EMMA LANE
SULLIVAN MISSOURI

CHK'D
DW-Stc

0046760

FIGURE 2

THIS DRAWING WAS ORIGINALLY DEVELOPED
BY ABB ENVIRONMENTAL SERVICES, INC.,
9-11-96, DWG. NO.: 6974C120.

Environmental Resources Management

Appendix A

Field Data Sheets

Environmental Resources Management
Ground Water Sampling
Field Data Form



Project # 0046760

Sample I.D. MW-101

Date 4/26/2006

Time 1505

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:

DAW

MDB

Affiliation:

ERM

ERM

Observers:

C. MCGHEE

Affiliation:

MDNR

Well Number MW-101

Total Depth 185 (ft)

I.D. 2 (in)

Material PVC

Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 161.57

Post-Purge _____

Sampling _____

Length of Water Column 23.43

Casing Volume 3.8 (gal)

Pumping Method Dedicated Bailer

Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
<u>60.9</u>	<u>7.22</u>	<u>292</u>	<u>60.2</u>	<u>Initial</u>
<u>130.0</u>	<u>7.21</u>	<u>285</u>	<u>59.2</u>	<u>5.0</u>
<u>143.0</u>	<u>7.25</u>	<u>286</u>	<u>59.1</u>	<u>10.0</u>
<u>214.0</u>	<u>7.26</u>	<u>285</u>	<u>59.2</u>	<u>12.0</u>

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1505

Split ground water sampling event with MDNR

Environmental Resources Management

Ground Water Sampling

Field Data Form



Project # 0046760

Sample I.D. MW-103

Date 4/27/2006

Time 1445

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
TTC	ERM	C. MCGHEE	MDNR
MDB	ERM		

Well Number MW-103 Total Depth 208 (ft) I.D. 2 (in)

Material PVC	Screened Interval	(ft)
--------------	-------------------	------

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 181.33 **Post-Purge** **Sampling**

Post-Purge

Sampling

Length of Water Column 26.67 **Casing Volume** 4.3 (gal)

Casing Volume 4.3 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1445 Split ground water sampling event with MDNR

Environmental Resources Management
Ground Water Sampling
Field Data Form



Project # 0046760

Sample I.D. MW-102A

Date 4/26/2006

Time 0855

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:

DAW

MDB

Affiliation:

ERM

ERM

Observers:

Affiliation:

Well Number MW-102A

Total Depth 275 (ft)

I.D. 2 (in)

Material PVC

Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 183.65

Post-Purge _____

Sampling _____

Length of Water Column 91.35

Casing Volume 14.9 (gal)

Pumping Method _____

Sampling Method _____

STABILIZATION TEST

Turbidity
(NTU)

pH

Conductance
(umhos/cm)

Temperature
(F)

Cumulative
Volume (gal)

OBSERVATIONS

No samples collected from well, only depth to water measurement.

Environmental Resources Management
Ground Water Sampling
Field Data Form



Project # 0046760 Sample I.D. MW-102B Date 4/26/2006 Time 0850

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	_____	_____
MDB	ERM	_____	_____
_____	_____	_____	_____
Well Number <u>MW-102B</u>	Total Depth <u>211.1</u> (ft)	I.D. <u>2</u> (in)	
Material <u>PVC</u>	Screened Interval _____	(ft)	

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge <u>171.67</u>	Post-Purge _____	Sampling _____
Length of Water Column <u>39.43</u>	Casing Volume <u>6.4</u> (gal)	
Pumping Method _____	Sampling Method _____	

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

OBSERVATIONS No samples collected from well, only depth to water measurement.

Environmental Resources Management
Ground Water Sampling
Field Data Form



Project # 0046760

Sample I.D. MW-104

Date 4/27/2006

Time 1140

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
TTC	ERM	C. MCGHEE	MDNR
MDB	ERM		

Well Number MW-104 Total Depth 202 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 179.34 Post-Purge _____ Sampling _____

Length of Water Column 22.66 Casing Volume 3.7 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
5.0	7.0	395	60.4	Initial
575.0	7.26	384	60.2	2.5
409.0	7.18	372	58.4	5.0
231.0	7.2	370	58.3	7.5
265.0	7.3	371	59.6	10.0
158.0	7.31	367	58.4	11.5

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1140
Split ground water sampling event with MDNR

**Environmental Resources Management
Ground Water Sampling
Field Data Form**



Project # 0046760

Sample I.D. MW-105

Date 4/26/2006

Time 1215

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:

DAW
MDB

Affiliation:

ERM
ERM

Observers:

C. MCGHEE

Affiliation:

MDNR

Well Number MW-105

Total Depth 177 (ft)

I.D. 2 (in)

Material PVC

Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 144.68

Post-Purge _____

Sampling _____

Length of Water Column 32.32

Casing Volume 5.3 (gal)

Pumping Method Dedicated Bailer

Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
<u>0.6</u>	<u>6.78</u>	<u>396</u>	<u>57.4</u>	<u>Initial</u>
<u>147.0</u>	<u>7.03</u>	<u>388</u>	<u>56.8</u>	<u>6</u>
<u>85.8</u>	<u>7.03</u>	<u>383</u>	<u>56.4</u>	<u>10</u>
<u>86.7</u>	<u>7.03</u>	<u>389</u>	<u>56.4</u>	<u>15</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1215

Split ground water sampling event with MDNR

Environmental Resources Management
Ground Water Sampling
Field Data Form



Project # 0046760

Sample I.D. Voss Well

Date 4/26/2006

Time 1020

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
<u>DAW</u>	<u>ERM</u>	<u>C. MCGHEE</u>	<u>MDNR</u>
<u>MDB</u>	<u>ERM</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

Well Number Voss Total Depth (ft) I.D. 2 (in)

Material PVC Screened Interval (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge Post-Purge Sampling

Length of Water Column Casing Volume (gal)

Pumping Method Dedicated Pump Sampling Method Dedicated Pump

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
<u>0.48</u>	<u>6.96</u>	<u>343</u>	<u>56.7</u>	<u>Initial</u>
<u>0.07</u>	<u>7.16</u>	<u>311</u>	<u>57.2</u>	<u>100</u>
<u>0.18</u>	<u>7.17</u>	<u>307</u>	<u>57.2</u>	<u>150</u>
<u>0.18</u>	<u>7.18</u>	<u>302</u>	<u>57.2</u>	<u>200</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

OBSERVATIONS Cumulative volume based on flow meter readings monitored during purging activities.
Water sample collected from spigot on well daytank after purging.
Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1020
Split ground water sampling event with MDNR

Appendix B

Laboratory Report and

Chain-of-Custody Forms

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University Park, IL 60466

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www.stl-inc.com

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 246136

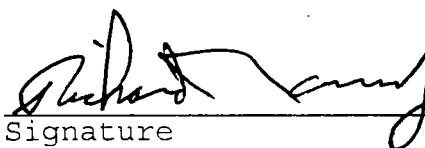
Prepared For:

Environmental Resource Management
1630 Heritage Landing Drive
Suite 100
St. Charles, MO 63303

Project: City of Sullivan Landfill

Attention: Dan Wilkens

Date: 05/09/2006


Signature

5/9/06
Date

Name: Rich Mannz

STL Chicago
2417 Bond Street
University Park, IL 60466

Title: Project Manager

E-Mail: rmannz@stl-inc.com

PHONE: (708) 534-5200
FAX...: (708) 534-5211

This Report Contains (35) Pages

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Severn Trent Laboratories, Inc.

Severn Trent Laboratories Chicago
GC/MS Case Narrative

Environmental Resource Management
CITY OF SULLIVAN LANDFILL
Job Number: 246136
VOA DATA:

1. All of the samples were analyzed within the 14-day hold time from the date of collection.
2. All Method Blank target compounds were below reporting limits.
3. The LCS/LCD (Laboratory Control Sample/Laboratory Control Duplicate) samples had all controlled spike recoveries within the in-house generated QC limits.
4. Matrix Spike/Matrix Spike Duplicate analyses were not performed on this sample set.
5. All samples had surrogate recoveries within the in-house generated QC limits.
6. The samples were prepared using Method 5030 and analyzed following SW846 Method 8260B and 8000B. All calibration criteria were met per method or SOP (for minimum R values for certain compounds). The low point in the initial calibration verifies the base reporting limits. The target compounds were quantitated using the initial calibration.
7. All internal standard areas and retention times were within SOP acceptance limits as compared to the corresponding calibration verification standard.
8. Sample 5 required a secondary dilution for target analytes. The other samples were analyzed without dilution using a 10-mL purge volume.

David Drabek

David Drabek
GC/MS VOA Dept.

Date

05/08/06

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S A M P L E I N F O R M A T I O N

Date: 05/09/2006

Job Number.: 246136
Customer...: Environmental Resource Management
Attn.....: Dan Wilkens

Project Number.....: 20006432
Customer Project ID....: CITY OF SULLIVAN LAN
Project Description....: City of Sullivan Landfill

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
246136-1	VOSS WELL	Water	04/26/2006	10:20	04/28/2006	09:45
246136-2	MW-105	Water	04/26/2006	12:15	04/28/2006	09:45
246136-3	MW-101	Water	04/26/2006	15:05	04/28/2006	09:45
246136-4	MW-104	Water	04/27/2006	11:40	04/28/2006	09:45
246136-5	MW-103	Water	04/27/2006	14:45	04/28/2006	09:45
246136-6	TRIP BLANK	Water	04/26/2006	00:00	04/28/2006	09:45

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L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management		PROJECT: CITY OF SULLIVAN LAN		ATTN: Dan Wilkens								
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Dichlorodifluoromethane	8.0	*		0.12	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Chloromethane	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Vinyl chloride	1.0	U	*	0.16	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Bromomethane	1.0	U		0.59	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Chloroethane	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Trichlorofluoromethane	93		H*	0.14	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1-Dichloroethene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Carbon disulfide	5.0	U		0.15	5.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Acetone	5.0	U		1.4	5.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Methylene chloride	1.2			0.24	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	trans-1,2-Dichloroethene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Methyl-tert-butyl-ether (MTBE)	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1-Dichloroethane	6.2			0.15	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	2,2-Dichloropropane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	cis-1,2-Dichloroethene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	2-Butanone (MEK)	5.0	U		1.0	5.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Bromochloromethane	1.0	U		0.27	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Chloroform	1.0	U		0.14	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1,1-Trichloroethane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1-dichloropropene	1.0	U		0.38	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Carbon tetrachloride	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Benzene	1.0	U		0.23	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2-Dichloroethane	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Trichloroethene	4.0			0.13	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2-Dichloropropane	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Dibromomethane	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Bromodichloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	cis-1,3-Dichloropropene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	

* In Description = Dry Wgt.

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L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: VOSS WELL
 Date Sampled.....: 04/26/2006
 Time Sampled.....: 10:20
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-1
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	4-Methyl-2-pentanone (MIBK)	5.0	U		0.92	5.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Toluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	trans-1,3-Dichloropropene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1,2-Trichloroethane	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Tetrachloroethene	1.2	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,3-Dichloropropane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	2-Hexanone	5.0	U		0.99	5.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Dibromochloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2-Dibromoethane (EDB)	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Chlorobenzene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1,1,2-Tetrachloroethane	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Ethylbenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	m&p-Xylenes	2.0	U		0.36	2.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	o-Xylene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Styrene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Bromoform	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Isopropylbenzene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Bromobenzene	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,1,2,2-Tetrachloroethane	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2,3-Trichloropropane	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	n-Propylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	2-Chlorotoluene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,3,5-Trimethylbenzene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	4-Chlorotoluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	tert-Butylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2,4-Trimethylbenzene	1.0	U		0.26	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	sec-Butylbenzene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,3-Dichlorobenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	p-Isopropyltoluene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	

* In Description = Dry Wgt.

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L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN-LAN

ATTN: Dan Wilkens

Customer Sample ID: VOSS WELL
Date Sampled.....: 04/26/2006
Time Sampled.....: 10:20
Sample Matrix.....: Water

Laboratory Sample ID: 246136-1
Date Received.....: 04/28/2006
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
6010B	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1454	djd	
	Metals Analysis (ICAP Trace)											
	Barium, Diss.	0.094			0.00032	0.010	1	mg/L	179593	05/01/06 1129	tds	
	Chromium, Diss.	0.010	U		0.0013	0.010	1	mg/L	179593	05/01/06 1129	tds	
	Lead, Diss.	0.0050	U		0.0026	0.0050	1	mg/L	179593	05/01/06 1129	tds	

* In Description = Dry Wgt.

Page 4

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LABORATORY TEST RESULTS												
Job Number: 246136		Date: 05/09/2006										
CUSTOMER: Environmental Resource Management		PROJECT: CITY OF SULLIVAN LAN										
Customer Sample ID: MW-105 Date Sampled.....: 04/26/2006 Time Sampled.....: 12:15 Sample Matrix.....: Water		Laboratory Sample ID: 246136-2 Date Received.....: 04/28/2006 Time Received.....: 09:45										
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics Dichlorodifluoromethane Chloromethane Vinyl chloride Bromomethane Chloroethane Trichlorofluoromethane 1,1-Dichloroethene Carbon disulfide Acetone Methylene chloride trans-1,2-Dichloroethene Methyl-tert-butyl-ether (MTBE) 1,1-Dichloroethane 2,2-Dichloropropane cis-1,2-Dichloroethene 2-Butanone (MEK) Bromochloromethane Chloroform 1,1,1-Trichloroethane 1,1-Dichloropropene Carbon tetrachloride Benzene 1,2-Dichloroethane Trichloroethene 1,2-Dichloropropane Dibromomethane Bromodichloromethane cis-1,3-Dichloropropene	3.2 1.0 1.0 1.0 1.0 1.0 18 1.0 5.0 5.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 2.4 1.0 1.0 1.0 1.0 1.0		*	0.12 0.20 0.16 0.59 0.32 0.14 0.25 0.15 1.4 0.24 0.29 0.21 0.15 0.17 0.20 1.0 0.27 0.14 0.17 0.38 0.34 0.23 0.25 0.13 0.19 0.21 0.22 0.15	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 5.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L 1.00000 ug/L	179917 179917		05/02/06 1538 05/02/06 1538	djd djd	

* In Description = Dry Wgt.

Page 5

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L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-105
 Date Sampled.....: 04/26/2006
 Time Sampled.....: 12:15
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-2
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	4-Methyl-2-pentanone (MIBK)	5.0	U		0.92	5.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Toluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	trans-1,3-Dichloropropene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,1,2-Trichloroethane	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Tetrachloroethene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,3-Dichloropropane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	2-Hexanone	5.0	U		0.99	5.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Dibromochloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,2-Dibromoethane (EDB)	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Chlorobenzene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,1,1,2-Tetrachloroethane	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Ethylbenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	m&p-Xylenes	2.0	U		0.36	2.0	1.00000	ug/L	179917	05/02/06	1538	djd
	o-Xylene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Styrene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Bromoform	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Isopropylbenzene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	Bromobenzene	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,1,2,2-Tetrachloroethane	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,2,3-Trichloropropane	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	n-Propylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	2-chlorotoluene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,3,5-Trimethylbenzene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	4-Chlorotoluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	tert-Butylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,2,4-Trimethylbenzene	1.0	U		0.26	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	sec-Butylbenzene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	1,3-Dichlorobenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06	1538	djd
	p-Isopropyltoluene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06	1538	djd

* In Description = Dry Wgt.

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L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-105
Date Sampled.....: 04/26/2006
Time Sampled.....: 12:15
Sample Matrix.....: Water

Laboratory Sample ID: 246136-2
Date Received.....: 04/28/2006
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1538	djd	
6010B	Metals Analysis (ICAP Trace)											
	Barium, Diss.	0.12			0.00032	0.010	1	mg/L	179593	05/01/06 1134	tds	
	Chromium, Diss.	0.010	U		0.0013	0.010	1	mg/L	179593	05/01/06 1134	tds	
	Lead, Diss.	0.0050	U		0.0026	0.0050	1	mg/L	179593	05/01/06 1134	tds	

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-101
 Date Sampled.....: 04/26/2006
 Time Sampled.....: 15:05
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-3
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Dichlorodifluoromethane	2.1		*	0.12	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Chloromethane	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Vinyl chloride	1.0	U	*	0.16	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Bromomethane	1.0	U		0.59	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Chloroethane	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Trichlorofluoromethane	20		*	0.14	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1-Dichloroethene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Carbon disulfide	5.0	U		0.15	5.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Acetone	5.0	U		1.4	5.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Methylene chloride	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	trans-1,2-Dichloroethene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Methyl-tert-butyl-ether (MTBE)	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1-Dichloroethane	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	2,2-Dichloropropane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	cis-1,2-Dichloroethene	0.69	J		0.20	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	2-Butanone (MEK)	5.0	U		1.0	5.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Bromochloromethane	1.0	U		0.27	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Chloroform	1.0	U		0.14	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1,1-Trichloroethane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1-Dichloropropene	1.0	U		0.38	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Carbon tetrachloride	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Benzene	1.0	U		0.23	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2-Dichloroethane	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Trichloroethene	2.4			0.13	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2-Dichloropropane	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Dibromomethane	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Bromodichloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	cis-1,3-Dichloropropene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-101
 Date Sampled.....: 04/26/2006
 Time Sampled.....: 15:05
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-3
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	4-Methyl-2-pentanone (MIBK)	5.0	U		0.92	5.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Toluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	trans-1,3-Dichloropropene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1,2-Trichloroethane	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Tetrachloroethene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,3-Dichloropropane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	2-Hexanone	5.0	U		0.99	5.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Dibromochloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2-Dibromoethane (EDB)	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Chlorobenzene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1,1,2-Tetrachloroethane	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Ethylbenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	m&p-Xylenes	2.0	U		0.36	2.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	o-Xylene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Styrene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Bromoform	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Isopropylbenzene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Bromobenzene	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,1,2,2-Tetrachloroethane	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2,3-Trichloropropane	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	n-Propylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	2-Chlorotoluene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,3,5-Trimethylbenzene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	4-Chlorotoluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	tert-Butylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2,4-Trimethylbenzene	1.0	U		0.26	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	sec-Butylbenzene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,3-Dichlorobenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	p-Isopropyltoluene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-101
Date Sampled.....: 04/26/2006
Time Sampled.....: 15:05
Sample Matrix.....: Water

Laboratory Sample ID: 246136-3
Date Received.....: 04/28/2006
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
6010B	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1601	djd	
	Metals Analysis (ICAP Trace)											
	Barium, Diss.	0.053			0.00032	0.010	1	mg/L	179593	05/01/06 1200	tds	
	Chromium, Diss.	0.010	U		0.0013	0.010	1	mg/L	179593	05/01/06 1200	tds	
	Lead, Diss.	0.0050	U		0.0026	0.0050	1	mg/L	179593	05/01/06 1200	tds	

* In Description = Dry Wgt.

Job Number: 246136

LABORATORY TEST RESULTS

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-104
 Date Sampled.....: 04/27/2006
 Time Sampled.....: 11:40
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-4
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Dichlorodifluoromethane	4.3		*	0.12	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Chloromethane	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Vinyl chloride	1.0	U	*	0.16	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Bromomethane	1.0	U		0.59	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Chloroethane	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Trichlorofluoromethane	65		*	0.14	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,1-Dichloroethene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Carbon disulfide	5.0	U		0.15	5.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Acetone	5.0	U		1.4	5.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Methylene chloride	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	trans-1,2-Dichloroethene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Methyl-tert-butyl-ether (MTBE)	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,1-Dichloroethane	1.1			0.15	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	2,2-Dichloropropane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	cis-1,2-Dichloroethene	0.60	J		0.20	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	2-Butanone (MEK)	5.0	U		1.0	5.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Bromochloromethane	1.0	U		0.27	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Chloroform	1.0	U		0.14	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,1,1-Trichloroethane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,1-Dichloropropene	1.0	U		0.38	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Carbon tetrachloride	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Benzene	1.0	U		0.23	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2-Dichloroethane	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Trichloroethene	6.5			0.13	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2-Dichloropropane	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Dibromomethane	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Bromodichloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	cis-1,3-Dichloropropene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management		PROJECT: CITY OF SULLIVAN LAN		ATTN: Dan Wilkens	
Customer Sample ID: MW-104 Date Sampled.....: 04/27/2006 Time Sampled.....: 11:40 Sample Matrix.....: Water		Laboratory Sample ID: 246136-4 Date Received.....: 04/28/2006 Time Received.....: 09:45			
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	NDL	RL
	4-Methyl-2-pentanone (MIBK)	5.0	U	0.92	5.0
	Toluene	1.0	U	0.18	1.0
	trans-1,3-Dichloropropene	1.0	U	0.16	1.0
	1,1,2-Trichloroethane	1.0	U	0.24	1.0
	Tetrachloroethene	1.3	U	0.18	1.0
	1,3-Dichloropropane	1.0	U	0.22	1.0
	2-Hexanone	5.0	U	0.99	5.0
	Dibromochloromethane	1.0	U	0.22	1.0
	1,2-Dibromoethane (EDB)	1.0	U	0.33	1.0
	Chlorobenzene	1.0	U	0.15	1.0
	1,1,1,2-Tetrachloroethane	1.0	U	0.33	1.0
	Ethylbenzene	1.0	U	0.21	1.0
	m&p-Xylenes	2.0	U	0.36	2.0
	o-Xylene	1.0	U	0.19	1.0
	Styrene	1.0	U	0.18	1.0
	Bromoform	1.0	U	0.32	1.0
	Isopropylbenzene	1.0	U	0.20	1.0
	Bromobenzene	1.0	U	0.22	1.0
	1,1,2,2-Tetrachloroethane	1.0	U	0.34	1.0
	1,2,3-Trichloropropane	1.0	U	0.35	1.0
	n-Propylbenzene	1.0	U	0.16	1.0
	2-Chlorotoluene	1.0	U	0.16	1.0
	1,3,5-Trimethylbenzene	1.0	U	0.18	1.0
	4-Chlorotoluene	1.0	U	0.18	1.0
	tert-Butylbenzene	1.0	U	0.16	1.0
	1,2,4-Trimethylbenzene	1.0	U	0.26	1.0
	sec-Butylbenzene	1.0	U	0.19	1.0
	1,3-Dichlorobenzene	1.0	U	0.21	1.0
	p-Isopropyltoluene	1.0	U	0.29	1.0

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-104
Date Sampled.....: 04/27/2006
Time Sampled.....: 11:40
Sample Matrix.....: Water

Laboratory Sample ID: 246136-4
Date Received.....: 04/28/2006
Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
6010B	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1624	djd	
	Metals Analysis (ICAP Trace)											
	Barium, Diss.	0.082			0.00032	0.010	1	mg/L	179593	05/01/06 1204	tds	
	Chromium, Diss.	0.010	U		0.0013	0.010	1	mg/L	179593	05/01/06 1204	tds	
	Lead, Diss.	0.0050	U		0.0026	0.0050	1	mg/L	179593	05/01/06 1204	tds	

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-103
 Date Sampled.....: 04/27/2006
 Time Sampled.....: 14:45
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-5
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics											
	Dichlorodifluoromethane	6.7		*	0.12	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Chloromethane	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Vinyl chloride	1.0	U	*	0.16	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Bromomethane	1.0	U		0.59	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Chloroethane	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Trichlorofluoromethane	150		*	1.4	10	10.00000	ug/L	179917	05/02/06	1732	djd
	1,1-Dichloroethene	0.57	J		0.25	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Carbon disulfide	5.0	U		0.15	5.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Acetone	5.0	U		1.4	5.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Methylene chloride	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	trans-1,2-Dichloroethene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Methyl-tert-butyl-ether (MTBE)	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	1,1-Dichloroethane	0.78	J		0.15	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	2,2-Dichloropropane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	cis-1,2-Dichloroethene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	2-Butanone (MEK)	5.0	U		1.0	5.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Bromochloromethane	1.0	U		0.27	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Chloroform	1.0	U		0.14	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	1,1,1-Trichloroethane	1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	1,1-Dichloropropene	1.0	U		0.38	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Carbon tetrachloride	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Benzene	1.0	U		0.23	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	1,2-Dichloroethane	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Trichloroethene	0.63	J		0.13	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	1,2-Dichloropropane	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Dibromomethane	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	Bromodichloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06	1710	djd
	cis-1,3-Dichloropropene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06	1710	djd

* In Description = Dry Wgt.

Job Number: 246136

LABORATORY TEST RESULTS

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-103
 Date Sampled.....: 04/27/2006
 Time Sampled.....: 14:45
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-5
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	4-Methyl-2-pentanone (MIBK)	5.0	U		0.92	5.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Toluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	trans-1,3-Dichloropropene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,1,2-Trichloroethane	1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Tetrachloroethene	1.5			0.18	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,3-Dichloropropane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	2-Hexanone	5.0	U		0.99	5.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Dibromochloromethane	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2-Dibromoethane (EDB)	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Chlorobenzene	1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,1,1,2-Tetrachloroethane	1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Ethylbenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	m&p-Xylenes	2.0	U		0.36	2.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	o-Xylene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Styrene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Bromoform	1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Isopropylbenzene	1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Bromobenzene	1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,1,2,2-Tetrachloroethane	1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2,3-Trichloropropane	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	n-Propylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	2-Chlorotoluene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,3,5-Trimethylbenzene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	4-Chlorotoluene	1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	tert-Butylbenzene	1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2,4-Trimethylbenzene	1.0	U		0.26	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	sec-Butylbenzene	1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,3-Dichlorobenzene	1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	p-Isopropyltoluene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

L A B O R A T O R Y T E S T R E S U L T S

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: MW-103
 Date Sampled.....: 04/27/2006
 Time Sampled.....: 14:45
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-5
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1710	djd	
6010B	Metals Analysis (ICAP Trace)											
	Barium, Diss.	0.057			0.00032	0.010	1	mg/L	179593	05/01/06 1209	tds	
	Chromium, Diss.	0.0016	B		0.0013	0.010	1	mg/L	179593	05/01/06 1209	tds	
	Lead, Diss.	0.0050	U		0.0026	0.0050	1	mg/L	179593	05/01/06 1209	tds	

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Customer Sample ID: TRIP BLANK
 Date Sampled.....: 04/26/2006
 Time Sampled.....: 00:00
 Sample Matrix.....: Water

Laboratory Sample ID: 246136-6
 Date Received.....: 04/28/2006
 Time Received.....: 09:45

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE	RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8260B	Volatile Organics												
	Dichlorodifluoromethane		1.0	U	*	0.12	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Chloromethane		1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Vinyl chloride		1.0	U	*	0.16	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Bromomethane		1.0	U		0.59	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Chloroethane		1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Trichlorofluoromethane		1.0	U	*	0.14	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1-Dichloroethene		1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Carbon disulfide		5.0	U		0.15	5.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Acetone		5.0	U		1.4	5.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Methylene chloride		5.2	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	trans-1,2-Dichloroethene		1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Methyl-tert-butyl-ether (MTBE)		1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1-Dichloroethane		1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	2,2-Dichloropropane		1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	cis-1,2-Dichloroethene		1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	2-Butanone (MEK)		5.0	U		1.0	5.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Bromochloromethane		1.0	U		0.27	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Chloroform		1.0	U		0.14	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1,1-Trichloroethane		1.0	U		0.17	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1-Dichloropropene		1.0	U		0.38	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Carbon tetrachloride		1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Benzene		1.0	U		0.23	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,2-Dichloroethane		1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Trichloroethene		1.0	U		0.13	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,2-Dichloropropane		1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Dibromomethane		1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Bromodichloromethane		1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	cis-1,3-Dichloropropene		1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	

* In Description = Dry Wgt.

LABORATORY TEST RESULTS													
Job Number: 246136		Date: 05/09/2006											
CUSTOMER: Environmental Resource Management		PROJECT: CITY OF SULLIVAN LAN											
Customer Sample ID: TRIP BLANK		Laboratory Sample ID: 246136-6											
Date Sampled.....: 04/26/2006		Date Received.....: 04/28/2006											
Time Sampled.....: 00:00		Time Received.....: 09:45											
Sample Matrix.....: Water													
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE	RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
	4-Methyl-2-pentanone (MIBK)		5.0	U		0.92	5.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Toluene		1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	trans-1,3-Dichloropropene		1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1,2-Trichloroethane		1.0	U		0.24	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Tetrachloroethene		1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,3-Dichloropropane		1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	2-Hexanone		5.0	U		0.99	5.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Dibromochloromethane		1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,2-Dibromoethane (EDB)		1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Chlorobenzene		1.0	U		0.15	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1,1,2-Tetrachloroethane		1.0	U		0.33	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Ethylbenzene		1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	m&p-Xylenes		2.0	U		0.36	2.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	o-Xylene		1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Styrene		1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Bromoform		1.0	U		0.32	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Isopropylbenzene		1.0	U		0.20	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	Bromobenzene		1.0	U		0.22	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,1,2,2-Tetrachloroethane		1.0	U		0.34	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,2,3-Trichloropropane		1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	n-Propylbenzene		1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	2-Chlorotoluene		1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,3,5-Trimethylbenzene		1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	4-Chlorotoluene		1.0	U		0.18	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	tert-Butylbenzene		1.0	U		0.16	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,2,4-Trimethylbenzene		1.0	U		0.26	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	sec-Butylbenzene		1.0	U		0.19	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	1,3-Dichlorobenzene		1.0	U		0.21	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	
	p-Isopropyltoluene		1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1755	djd	

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS													
Job Number: 246136											Date: 05/09/2006		
CUSTOMER: Environmental Resource Management			PROJECT: CITY OF SULLIVAN LAN								ATTN: Dan Wilkens		
Customer Sample ID: TRIP BLANK							Laboratory Sample ID: 246136-6						
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH	
	1,4-Dichlorobenzene	1.0	U		0.25	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	n-Butylbenzene	1.0	U		0.35	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	1,2-Dichlorobenzene	1.0	U		0.29	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	1,2-Dibromo-3-chloropropane	1.0	U		0.41	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	1,2,4-Trichlorobenzene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	Hexachlorobutadiene	1.0	U		0.36	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	Naphthalene	1.0	U		0.37	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		
	1,2,3-Trichlorobenzene	1.0	U		0.43	1.0	1.00000	ug/L	179917	05/02/06 1755	djd		

* In Description = Dry Wgt.

LABORATORY CHRONICLE

Job Number: 246136

Date: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Lab ID:	Client ID:	Method	Description	Date Recvd:	Sample	Date:		
		METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
246136-1	VOSS WELL	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1454
		3010A	Acid Digestion (ICAP)	1	179515		04/30/2006	0655
		6010B	Metals Analysis (ICAP Trace)	1	179593	179515	05/01/2006	1129
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1454
246136-2	MW-105	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1538
		3010A	Acid Digestion (ICAP)	1	179515		04/30/2006	0655
		6010B	Metals Analysis (ICAP Trace)	1	179593	179515	05/01/2006	1134
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1538
246136-3	MW-101	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1601
		3010A	Acid Digestion (ICAP)	1	179515		04/30/2006	0655
		6010B	Metals Analysis (ICAP Trace)	1	179593	179515	05/01/2006	1200
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1601
246136-4	MW-104	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1624
		3010A	Acid Digestion (ICAP)	1	179515		04/30/2006	0655
		6010B	Metals Analysis (ICAP Trace)	1	179593	179515	05/01/2006	1204
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1624
246136-5	MW-103	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1710
		5030B	5030 10 mL Purge Prep	2	179913		05/02/2006	1732
		3010A	Acid Digestion (ICAP)	1	179515		04/30/2006	0655
		6010B	Metals Analysis (ICAP Trace)	1	179593	179515	05/01/2006	1209
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1710
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1732
246136-6	TRIP BLANK	5030B	5030 10 mL Purge Prep	1	179913		05/02/2006	1755
		5030B	5030 10 mL Purge Prep	2	180030		05/04/2006	1116
		8260B	Volatile Organics	1	179917	179913	05/02/2006	1755

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S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

Method.....: Volatile Organics
Method Code...: 8260B

Test Matrix...: Water
Batch(s).....: 179917

Prep Batch..: 179913

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
LCD			05/02/2006	102	99	109	94
LCS			05/02/2006	99	99	100	92
MB			05/02/2006	98	96	97	98
246136- 1		VOSS WELL	05/02/2006	102	102	98	93
246136- 2		MW-105	05/02/2006	101	100	104	93
246136- 3		MW-101	05/02/2006	101	102	104	93
246136- 4		MW-104	05/02/2006	102	99	102	94
246136- 5		MW-103	05/02/2006	103	102	102	93
246136- 5	D1	MW-103	05/02/2006	99	96	101	97
246136- 6		TRIP BLANK	05/02/2006	101	97	103	101

Test	Test Description	Limits
12DCED	1,2-Dichloroethane-d4 (surr)	62 - 127
BRFLBE	4-Bromofluorobenzene (surr)	67 - 132
DBRFLM	Dibromofluoromethane (surr)	77 - 119
TOLD8	Toluene-d8 (surr)	81 - 126

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: 8260B Method Description.: Volatile Organics	Equipment Code....: GCL2 Batch.....: 179917	Analyst...: djd
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LCD	Laboratory Control Sample Duplicate	V06E02DSA	179913-003		05/02/2006	2011
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Dichlorodifluoromethane	ug/L	13.318	17.705	25.000	1.000	U 53.28	% 24-171	R 20	*
Chloromethane	ug/L	19.773	23.509	25.000	1.000	U 79.17	% 31-182	R 20	
Vinyl chloride	ug/L	19.062	23.496	25.000	1.000	U 76.21	% 52-134	R 20	*
Bromomethane	ug/L	23.782	26.834	25.000	1.000	U 95.12	% 31-188	R 20	
Chloroethane	ug/L	23.726	26.997	25.000	1.000	U 95.13	% 58-148	R 20	
Trichlorofluoromethane	ug/L	19.919	27.071	25.000	1.000	U 80.30	% 54-142	R 20	*
1,1-Dichloroethene	ug/L	22.336	22.875	25.000	1.000	U 89.2	% 51-136	R 20	
Carbon disulfide	ug/L	20.335	20.423	25.000	5.000	U 81.0	% 21-111	R 20	
Acetone	ug/L	35.220	37.214	25.000	5.000	U 141.6	% 14-177	R 20	
Methylene chloride	ug/L	26.449	24.945	25.000	1.000	U 106.6	% 64-127	R 20	
trans-1,2-Dichloroethene	ug/L	24.717	24.770	25.000	1.000	U 99.0	% 62-138	R 20	
Methyl-tert-butyl-ether (MTBE)	ug/L	25.330	26.494	25.000	1.000	U 101.4	% 55-142	R 20	
1,1-Dichloroethane	ug/L	26.717	26.025	25.000	1.000	U 107.3	% 70-124	R 20	
2,2-Dichloropropane	ug/L	23.812	26.743	25.000	1.000	U 95.12	% 68-127	R 20	
cis-1,2-Dichloroethene	ug/L	26.844	25.812	25.000	1.000	U 107.4	% 76-125	R 20	
2-Butanone (MEK)	ug/L	31.810	30.993	25.000	5.000	U 127.3	% 29-139	R 20	
Bromochloromethane	ug/L	25.783	26.438	25.000	1.000	U 103.3	% 57-116	R 20	
Chloroform	ug/L	27.482	26.857	25.000	1.000	U 110.2	% 75-122	R 20	
1,1,1-Trichloroethane	ug/L	26.190	26.991	25.000	1.000	U 105.3	% 70-127	R 20	
1,1-Dichloropropene	ug/L	25.929	26.662	25.000	1.000	U 104.3	% 70-125	R 20	
Carbon tetrachloride	ug/L	22.887	25.500	25.000	1.000	U 92.11	% 64-132	R 20	
Benzene	ug/L	23.714	25.050	25.000	1.000	U 95.5	% 75-122	R 20	
1,2-Dichloroethane	ug/L	26.071	26.265	25.000	1.000	U 104.1	% 67-120	R 20	
Trichloroethene	ug/L	23.514	24.475	25.000	1.000	U 94.4	% 75-124	R 20	
1,2-Dichloropropane	ug/L	24.690	25.254	25.000	1.000	U 99.2	% 76-116	R 20	

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCD	Laboratory Control Sample Duplicate	V06E02DSA	179913-003		05/02/2006	2011
	Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value QC Calc.
Dibromomethane	ug/L	24.662	25.007	25.000	1.000 U 99	% 68-116
Bromodichloromethane	ug/L	26.485	27.519	25.000	1.000 U 106	R 20 % 75-125
cis-1,3-Dichloropropene	ug/L	24.678	25.498	26.000	1.000 U 95	R 20 % 72-115
4-Methyl-2-pentanone (MIBK)	ug/L	25.266	26.168	25.000	5.000 U 101	R 20 % 39-137
Toluene	ug/L	23.705	24.229	25.000	1.000 U 95	R 20 % 77-120
trans-1,3-Dichloropropene	ug/L	22.420	22.577	24.000	1.000 U 93	R 20 % 68-119
1,1,2-Trichloroethane	ug/L	26.832	24.757	25.000	1.000 U 107	R 20 % 63-127
Tetrachloroethene	ug/L	21.382	24.167	25.000	1.000 U 86	R 20 % 70-125
1,3-Dichloropropane	ug/L	24.599	25.255	25.000	1.000 U 98	R 20 % 72-118
2-Hexanone	ug/L	25.796	29.079	25.000	5.000 U 103	R 20 % 36-144
Dibromochloromethane	ug/L	25.581	26.633	25.000	1.000 U 102	R 20 % 73-116
1,2-Dibromoethane (EDB)	ug/L	24.028	23.468	25.000	1.000 U 96	R 20 % 62-123
Chlorobenzene	ug/L	24.001	24.770	25.000	1.000 U 96	R 20 % 76-116
1,1,1,2-Tetrachloroethane	ug/L	25.745	26.870	25.000	1.000 U 103	R 20 % 77-120
Ethylbenzene	ug/L	24.084	25.493	25.000	1.000 U 96	R 20 % 75-125
m&p-Xylenes	ug/L	48.038	51.289	50.000	2.000 U 96	R 20 % 75-123
o-Xylene	ug/L	24.548	26.366	25.000	1.000 U 98	R 20 % 76-121
Styrene	ug/L	24.986	25.487	25.000	1.000 U 100	R 20 % 77-128
Bromoform	ug/L	24.378	25.759	25.000	1.000 U 98	R 20 % 65-115
Isopropylbenzene	ug/L	22.217	23.595	25.000	1.000 U 89	R 20 % 64-119
Bromobenzene	ug/L	24.380	24.343	25.000	1.000 U 98	R 20 % 76-118
1,1,2,2-Tetrachloroethane	ug/L	25.547	25.415	25.000	1.000 U 102	R 20 % 61-122
1,2,3-Trichloropropene	ug/L	23.841	24.631	25.000	1.000 U 95	R 20 % 62-124
n-Propylbenzene	ug/L	24.245	25.788	25.000	1.000 U 97	R 20 % 69-132
2-Chlorotoluene	ug/L	25.059	25.601	25.000	1.000 U 100	R 20 % 70-127
1,3,5-Trimethylbenzene	ug/L	25.051	26.610	25.000	1.000 U 100	R 20 % 70-132
4-Chlorotoluene	ug/L	24.656	25.508	25.000	1.000 U 99	R 20 % 70-126

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCD	Laboratory Control Sample Duplicate	V06E02DSA	179913-003		05/02/2006	2011
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
tert-Butylbenzene	ug/L	24.599	27.154	25.000	1.000	U 98	%	70-133	
1,2,4-Trimethylbenzene	ug/L	25.132	26.255	25.000	1.000	U 101	%	71-131	R 20
sec-Butylbenzene	ug/L	24.149	26.544	25.000	1.000	U 97	%	70-134	R 20
1,3-Dichlorobenzene	ug/L	23.989	24.874	25.000	1.000	U 96	%	71-120	R 20
p-Isopropyltoluene	ug/L	23.461	25.995	25.000	1.000	U 94	%	66-130	R 20
1,4-Dichlorobenzene	ug/L	24.000	24.700	25.000	1.000	U 96	%	70-118	R 20
n-Butylbenzene	ug/L	24.132	27.310	25.000	1.000	U 97	%	64-142	R 20
1,2-Dichlorobenzene	ug/L	24.171	25.039	25.000	1.000	U 97	%	72-118	R 20
1,2-Dibromo-3-chloropropane	ug/L	24.891	25.479	25.000	1.000	U 100	%	57-119	R 20
1,2,4-Trichlorobenzene	ug/L	23.812	26.358	25.000	1.000	U 95	%	60-132	R 20
Hexachlorobutadiene	ug/L	22.969	28.191	25.000	1.000	U 92	%	63-145	R 20
Naphthalene	ug/L	25.177	26.544	25.000	1.000	U 101	%	57-128	R 20
1,2,3-Trichlorobenzene	ug/L	24.675	26.034	25.000	1.000	U 99	%	66-124	R 20

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: 8260B

Method Description.: Volatile Organics

Equipment Code....: GCL2

Batch.....: 179917

Analyst...: djd

LCS	Laboratory Control Sample	V06E02DSA	179913-002		05/02/2006	1046
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Dichlorodifluoromethane	ug/L	17.705		25.000	1.000	U 71	%	24-171	
Chloromethane	ug/L	23.509		25.000	1.000	U 94	%	31-182	
Vinyl chloride	ug/L	23.496		25.000	1.000	U 94	%	52-134	
Bromomethane	ug/L	26.834		25.000	1.000	U 107	%	31-188	
Chloroethane	ug/L	26.997		25.000	1.000	U 108	%	58-148	
Trichlorodifluoromethane	ug/L	27.071		25.000	1.000	U 108	%	54-142	
1,1-Dichloroethene	ug/L	22.875		25.000	1.000	U 92	%	51-136	
Carbon disulfide	ug/L	20.423		25.000	5.000	U 82	%	21-111	
Acetone	ug/L	37.214		25.000	5.000	U 149	%	14-177	
Methylene chloride	ug/L	24.945		25.000	1.000	U 100	%	64-127	
trans-1,2-Dichloroethene	ug/L	24.770		25.000	1.000	U 99	%	62-138	
Methyl-tert-butyl-ether (MTBE)	ug/L	26.494		25.000	1.000	U 106	%	55-142	
1,1-Dichloroethane	ug/L	26.025		25.000	1.000	U 104	%	70-124	
2,2-Dichloropropane	ug/L	26.743		25.000	1.000	U 107	%	68-127	
cis-1,2-Dichloroethene	ug/L	25.812		25.000	1.000	U 103	%	76-125	
2-Butanone (MEK)	ug/L	30.993		25.000	5.000	U 124	%	29-139	
Bromoform	ug/L	26.438		25.000	1.000	U 106	%	57-116	
1,1,1-Trichloroethane	ug/L	26.857		25.000	1.000	U 107	%	75-122	
1,1-Dichloropropene	ug/L	26.991		25.000	1.000	U 108	%	70-127	
Carbon tetrachloride	ug/L	26.662		25.000	1.000	U 107	%	70-125	
Benzene	ug/L	25.500		25.000	1.000	U 102	%	64-132	
1,2-Dichloroethane	ug/L	25.050		25.000	1.000	U 100	%	75-122	
Trichloroethene	ug/L	26.265		25.000	1.000	U 105	%	67-120	
1,2-Dichloropropane	ug/L	24.475		25.000	1.000	U 98	%	75-124	
Dibromomethane	ug/L	25.254		25.000	1.000	U 101	%	76-116	
Bromodichloromethane	ug/L	25.007		25.000	1.000	U 100	%	68-116	
cis-1,3-Dichloropropene	ug/L	27.519		25.000	1.000	U 110	%	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	25.498		26.000	1.000	U 98	%	72-115	
Toluene	ug/L	26.168		25.000	5.000	U 105	%	39-137	
trans-1,3-Dichloropropene	ug/L	24.229		25.000	1.000	U 97	%	77-120	
1,1,2-Trichloroethane	ug/L	22.577		24.000	1.000	U 94	%	68-119	
Tetrachloroethene	ug/L	24.757		25.000	1.000	U 99	%	63-127	
1,3-Dichloropropane	ug/L	24.167		25.000	1.000	U 97	%	70-125	
2-Hexanone	ug/L	25.255		25.000	1.000	U 101	%	72-118	
Dibromochloromethane	ug/L	29.079		25.000	5.000	U 116	%	36-144	
1,2-Dibromoethane (EDB)	ug/L	26.633		25.000	1.000	U 107	%	73-116	
Chlorobenzene	ug/L	23.468		25.000	1.000	U 94	%	62-123	
1,1,1,2-Tetrachloroethane	ug/L	24.770		25.000	1.000	U 99	%	76-116	
Ethylbenzene	ug/L	26.870		25.000	1.000	U 107	%	77-120	
m&p-Xylenes	ug/L	25.493		25.000	1.000	U 102	%	75-125	
o-Xylene	ug/L	51.289		50.000	2.000	U 103	%	75-123	
Styrene	ug/L	26.366		25.000	1.000	U 105	%	76-121	
Bromoform	ug/L	25.487		25.000	1.000	U 102	%	77-128	
Isopropylbenzene	ug/L	25.759		25.000	1.000	U 103	%	65-115	
Bromobenzene	ug/L	23.595		25.000	1.000	U 94	%	64-119	
1,1,2,2-Tetrachloroethane	ug/L	24.343		25.000	1.000	U 97	%	76-118	
1,2,3-Trichloropropane	ug/L	25.415		25.000	1.000	U 102	%	61-122	
n-Propylbenzene	ug/L	24.631		25.000	1.000	U 99	%	62-124	
2-Chlorotoluene	ug/L	25.788		25.000	1.000	U 103	%	69-132	
		25.601		25.000	1.000	U 102	%	70-127	

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	V06E02DSA	179913-002		05/02/2006	1046
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
1,3,5-Trimethylbenzene	ug/L	26.610		25.000	1.000	U 106	%	70-132	
4-Chlorotoluene	ug/L	25.508		25.000	1.000	U 102	%	70-126	
tert-Butylbenzene	ug/L	27.154		25.000	1.000	U 109	%	70-133	
1,2,4-Trimethylbenzene	ug/L	26.255		25.000	1.000	U 105	%	71-131	
sec-Butylbenzene	ug/L	26.544		25.000	1.000	U 106	%	70-134	
1,3-Dichlorobenzene	ug/L	24.874		25.000	1.000	U 99	%	71-120	
p-Isopropyltoluene	ug/L	25.995		25.000	1.000	U 104	%	66-130	
1,4-Dichlorobenzene	ug/L	24.700		25.000	1.000	U 99	%	70-118	
n-Butylbenzene	ug/L	27.310		25.000	1.000	U 109	%	64-142	
1,2-Dichlorobenzene	ug/L	25.039		25.000	1.000	U 100	%	72-118	
1,2-Dibromo-3-chloropropane	ug/L	25.479		25.000	1.000	U 102	%	57-119	
1,2,4-Trichlorobenzene	ug/L	26.358		25.000	1.000	U 105	%	60-132	
Hexachlorobutadiene	ug/L	28.191		25.000	1.000	U 113	%	63-145	
Naphthalene	ug/L	26.544		25.000	1.000	U 106	%	57-128	
1,2,3-Trichlorobenzene	ug/L	26.034		25.000	1.000	U 104	%	66-124	

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: 8260B

Equipment Code....: GCL2

Analyst...: djd

Method Description.: Volatile Organics

Batch.....: 179917

MB	Method Blank		179913-001		05/02/2006	1023
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	* Limits	F
Dichlorodifluoromethane	ug/L	1.000	U					
Chloromethane	ug/L	1.000	U					
Vinyl chloride	ug/L	1.000	U					
Bromomethane	ug/L	1.000	U					
Chloroethane	ug/L	1.000	U					
Trichlorofluoromethane	ug/L	1.000	U					
1,1-Dichloroethene	ug/L	1.000	U					
Carbon disulfide	ug/L	5.000	U					
Acetone	ug/L	5.000	U					
Methylene chloride	ug/L	1.000	U					
trans-1,2-Dichloroethene	ug/L	1.000	U					
Methyl-tert-butyl-ether (MTBE)	ug/L	1.000	U					
1,1-Dichloroethane	ug/L	1.000	U					
2,2-Dichloropropane	ug/L	1.000	U					
cis-1,2-Dichloroethene	ug/L	1.000	U					
2-Butanone (MEK)	ug/L	5.000	U					
Bromochloromethane	ug/L	1.000	U					
Chloroform	ug/L	1.000	U					
1,1,1-Trichloroethane	ug/L	1.000	U					
1,1-Dichloropropene	ug/L	1.000	U					
Carbon tetrachloride	ug/L	1.000	U					
Benzene	ug/L	1.000	U					
1,2-Dichloroethane	ug/L	1.000	U					
Trichloroethene	ug/L	1.000	U					
1,2-Dichloropropane	ug/L	1.000	U					
Dibromomethane	ug/L	1.000	U					
Bromodichloromethane	ug/L	1.000	U					
cis-1,3-Dichloropropene	ug/L	1.000	U					
4-Methyl-2-pentanone (MIBK)	ug/L	5.000	U					
Toluene	ug/L	1.000	U					
trans-1,3-Dichloropropene	ug/L	1.000	U					
1,1,2-Trichloroethane	ug/L	1.000	U					
Tetrachloroethene	ug/L	1.000	U					
1,3-Dichloropropane	ug/L	1.000	U					
2-Hexanone	ug/L	5.000	U					
Dibromochloromethane	ug/L	1.000	U					
1,2-Dibromoethane (EDB)	ug/L	1.000	U					
Chlorobenzene	ug/L	1.000	U					
1,1,1,2-Tetrachloroethane	ug/L	1.000	U					
Ethylbenzene	ug/L	1.000	U					
m&p-Xylenes	ug/L	2.000	U					
o-Xylene	ug/L	1.000	U					
Styrene	ug/L	1.000	U					
Bromoform	ug/L	1.000	U					
Isopropylbenzene	ug/L	1.000	U					
Bromobenzene	ug/L	1.000	U					
1,1,2,2-Tetrachloroethane	ug/L	1.000	U					
1,2,3-Trichloropropane	ug/L	1.000	U					
n-Propylbenzene	ug/L	1.000	U					
2-Chlorotoluene	ug/L	1.000	U					

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank		179913-001		05/02/2006	1023
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
1,3,5-Trimethylbenzene	ug/L	1.000	U						
4-Chlorotoluene	ug/L	1.000	U						
tert-Butylbenzene	ug/L	1.000	U						
1,2,4-Trimethylbenzene	ug/L	1.000	U						
sec-Butylbenzene	ug/L	1.000	U						
1,3-Dichlorobenzene	ug/L	1.000	U						
p-Isopropyltoluene	ug/L	1.000	U						
1,4-Dichlorobenzene	ug/L	1.000	U						
n-Butylbenzene	ug/L	1.000	U						
1,2-Dichlorobenzene	ug/L	1.000	U						
1,2-Dibromo-3-chloropropane	ug/L	1.000	U						
1,2,4-Trichlorobenzene	ug/L	1.000	U						
Hexachlorobutadiene	ug/L	1.000	U						
Naphthalene	ug/L	1.000	U						
1,2,3-Trichlorobenzene	ug/L	1.000	U						

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: 6010B

Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP5

Batch.....: 179593

Analyst...: tds

LCS	Laboratory Control Sample	M06CSPK002	179515-002			05/01/2006 1102
Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.
Barium	mg/L	1.94798		2.00000	0.00101	B 97
Chromium	mg/L	0.19644		0.20000	0.00130	U 98
Lead	mg/L	0.09976		0.10000	0.00260	U 100

QUALITY CONTROL RESULTS

Job Number.: 246136

Report Date.: 05/09/2006

CUSTOMER: Environmental Resource Management

PROJECT: CITY OF SULLIVAN LAN

ATTN: Dan Wilkens

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
Test Method.....	6010B Method Description.: Metals Analysis (ICAP Trace)	Equipment Code....	ICP5 Batch.....	179593	Analyst...:	tds

MB	Method Blank	179515	179515-001		05/01/2006	1057
Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. * Limits F
Barium	mg/L	0.00101	B			
Chromium	mg/L	0.00130	U			
Lead	mg/L	0.00260	U			

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/09/2006

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- < Not detected at or above the reporting limit.
- J Result is less than the RL, but greater than or equal to the method detection limit.
- B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- S Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- * LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- + MSA correlation coefficient is less than 0.995.
- 4 MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
- H MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- W AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Q Result was qualitatively confirmed, but not quantified.
- C Pesticide identification was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- Z The chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)

Organic Flags (Flags Column)

- B MB: Batch QC is greater than reporting limit.
- * LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
- EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- A Concentration exceeds the instrument calibration range
- a Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
- D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
- H Alternate peak selection upon analytical review
- I Indicates the presence of an interfence, recovery is not calculated.
- M Manually integrated compound.
- P The lower of the two values is reported when the % difference between the results of two GC columns is

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/09/2006

greater than 25%.

Abbreviations

AS	Post Digestion Spike (GFAA Samples - See Note 1 below)
Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column CCB Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Confirmation analysis of original
C1	Confirmation analysis of A1 or D1
C2	Confirmation analysis of A2 or D2
C3	Confirmation analysis of A3 or D3
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
CV	Calibration Verification Standard
Dil Fac	Dilution Factor - Secondary dilution analysis
D1	Dilution 1
D2	Dilution 2
D3	Dilution 3
DLFac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB1	Extraction Blank 1
EB2	Extraction Blank 2
EB3	DI Blank
ELC	Method Extracted LCS
ELD	Method Extracted LCD
ICAL	Initial calibration
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A - ICAP
ISB	Interference Check Sample B - ICAP
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group Lab ID An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
NDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PREPF	Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS	Post Digestion Spike (ICAP)
RA	Re-analysis of original
A1	Re-analysis of D1
A2	Re-analysis of D2
A3	Re-analysis of D3
RD	Re-extraction of dilution
RE	Re-extraction of original
RC	Re-extraction Confirmation
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RT	Retention Time

Q U A L I T Y A S S U R A N C E M E T H O D S

R E F E R E N C E S A N D N O T E S

Report Date: 05/09/2006

RTW Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number

SCB Seeded Control Blank

SD Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL)

UCB Unseeded Control Blank

SSV Second Source Verification Standard

SLCS Solid Laboratory Control Standard(LCS)

PHC pH Calibration Check LCSP pH Laboratory Control Sample

LCDP pH Laboratory Control Sample Duplicate

MDPH pH Sample Duplicate

MDFP Flashpoint Sample Duplicate

LCFP Flashpoint LCS

G1 Gelex Check Standard Range 0-1

G2 Gelex Check Standard Range 1-10

G3 Gelex Check Standard Range 10-100

G4 Gelex Check Standard Range 100-1000

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)

Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

**Chain of
Custody Record**

STL-4124 (0901)

SEVERN
TRENT

Severn Trent Laboratories, Inc.

STL

246136

Client ERM, Inc.	Project Manager DAN WILMANS	Date 4/27/2006	Chain of Custody Number 264920
Address 1630 HERITAGE LANDING DR. STE 100	Telephone Number (Area Code)/Fax Number 636.928.0300 / 928.2050	Lab Number	
City ST. CHARLES	State MD	Zip Code 63303	Page 1 of 1

Project Name and Location (State) TRW - FORMER CITY OF SULLIVAN LANDFILL	Carrier/Waybill Number LAND DELEVERY TO STL LAB	Analysis (Attach list if more space is needed)									
Contract/Purchase Order/Quote No. 0046760	Matrix	Containers & Preservatives									
		VOCs	Boron	M	Barium	L	Lead	D	Sed	Cadmium	Uranium

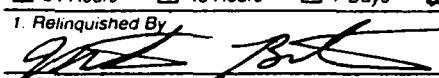
Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH
1 Voss WELL		04/26/06	1020	X					1	2		X	X	X X
2 MW - 105		04/26/06	1215	X					1	3		X	X	X X
3 MW - 101		04/26/06	1505	X					1	3		X	X	X X
4 MW - 104		04/27/06	1140	X					1	3		X	X	X X
5 MW - 103		04/27/06	1445	X					1	3		X	X	X X
6 TRIP BLANK		—	—	X					1			X		

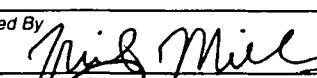
Possible Hazard Identification	Sample Disposal	(A fee may be assessed if samples are retained longer than 1 month)
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	

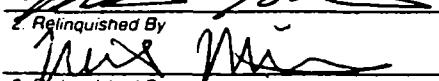
Turn Around Time Required

24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify)

1. Relinquished By  Date **4/27/06** Time **1655**

2. Received By  Date **4/27/06** Time **1655**

3. Relinquished By  Date **04.27.06** Time **1700**

Comments
DISSOLVED METALS HAVE BEEN ADD. FILTERED

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

2.2°C

Appendix C

*Landfill Inspection Reports
First Quarter 2004 through
First Quarter 2006*

Franklin County (SW)
Sullivan Sanitary Landfill



Bob Holden, Governor • Stephen M. Mahfood, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.state.mo.us

May 4, 2004

Mr. Marv Harman
City Administrator
Sullivan City Hall
210 West Washington
Sullivan, MO 63080

Dear Mr. Harman:

Enclosed is a checklist of an inspection conducted at the City of Sullivan Sanitary landfill on April 15, 2004, by Lei Hou of my staff. Representing the Sullivan Sanitary landfill was Mr. Tom Harman. The inspection was performed to assess compliance with the Missouri Solid Waste Management Law and Regulations.

No violations were noted during the inspection. Thank you for your cooperation. If you have any questions or comments, please contact Ms. Hou at the St. Louis Regional Office, 7545 South Lindbergh Blvd., Suite 210, St. Louis, MO 63125, phone number 314-416-2960.

Sincerely,

ST. LOUIS REGIONAL OFFICE

Mohamad Alhalabi, P.E.

Regional Director

MA/LH/bk

Enclosure: Inspection Checklist

Cc: SWMP

Dave Mosby, HWP Superfund Section

Integrity and excellence in all we do



MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
CLOSED LANDFILL INSPECTION CHECKLIST

Appendix 4.11

TYPE OF INSPECTION ►

3

I. GENERAL INFORMATION

DATE OF INSPECTION <u>4/15/04</u>	FACILITY NAME <u>Sullivan Sanitary Landfill</u>		
OWNER <u>City of Sullivan</u>	COUNTY <u>Franklin</u>	PERMIT NUMBER <u>107118/107103</u>	
MAILING ADDRESS <u>210 West Washington</u>	CITY <u>Sullivan</u>	STATE <u>MO</u>	ZIP CODE <u>63080</u>
DATE OF CLOSURE <u>November 15, 2000</u>	TEMPERATURE/WEATHER <u>55 °F / Sunny</u>		

II. INSPECTION CHECKLIST – Check all sections S = Satisfactory, U = Unsatisfactory, or N = Not Applicable
[DLF = cite for demolition waste landfill; ULF = cite for utility waste landfill]

S	U	N	
<u>10 CSR 80-2.030</u> SOLID WASTE DISPOSAL AREA CLOSURE, POST-CLOSURE CARE and CORRECTIVE ACTIONS PLANS and PROCEDURES			
1. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(3) Deposited material not excavated, disrupted, or removed without prior departmental approval
2. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(4)(A)3E Post-closure plan properly implemented
3. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(4)(A)3F Modification of solid waste disposal area and post-closure plan approved prior to implementation
<u>10 CSR 80-3.010</u> DESIGN AND OPERATION			
4. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(8)(C)1 Surface water courses and runoff diverted from landfill without excessive erosion; regrading as required to avoid ponding [DLF 4.010(8)(C)1; ULF 11.010(8)(C)1]
5. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(9)(C)1 Leachate collection system properly operated and maintained per permit and approved plans [DLF 4.010(9)(C)1; ULF 11.010(9)(C)1]
6. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(9)(C)2 Leachate not allowed to discharge off-site or into waters of the state, except in accordance with MO Clean Water Law and rules [DLF 4.010(9)(C)2; ULF 11.010(9)(C)2]
7. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(11)(C)1D Groundwater wells and piezometers decommissioned in accordance with 10 CSR 23-4 [DLF 4.010(11)(C)1D; ULF 11.010(11)(C)1D]
8. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14)(C)1 Decomposition gases not allowed to migrate laterally from landfill [DLF 4.010(14)(C)1]
9. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14)(C)2A Methane not allowed to concentrate in buildings on-site above 25% LEL (1.25% by volume) [DLF 4.010(14)(C)2A]
10. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14)(C)2B Methane not allowed to concentrate in soil at the property boundary above 50% LEL (2.5% by volume) [DLF 4.010(14)(C)2B]
11. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(17)(C)7 Surface grades and side slopes maintained [DLF 4.010(17)(C)5; ULF 11.010(14)(C)6]
12. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(17)(C)8 Adequate vegetation maintained [DLF 4.010(17)(C)6; ULF 11.010(14)(C)7]
13. <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(17)(C)9 Regrading and recovering performed as necessary [DLF 4.010(17)(C)7; ULF 11.010(14)(C)8]

III. REMARKS – All blocks marked U (Unsatisfactory) or N (Not Applicable) require a written explanation.

The landfill was very well maintained!

SIGNATURE OF INSPECTOR

Lei Hou

OFFICE

St. Louis Regional Office

SULLIVAN LANDFILL

Inspection Checklist

Date: 1 - 23 - 2004Weather Conditions: Clear &

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>OK</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	<u> </u>
b. Current Level in Tank	<u> </u>
c. Pump Sta. #1 Operational	<u> </u>
d. Pump Sta. #2 Operational	<u> </u>
e. Pump Sta. #3 Operational	<u> </u>
4. Date of Last Grass Mowing	<u>July 2003</u>

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by:

Bob Dahl

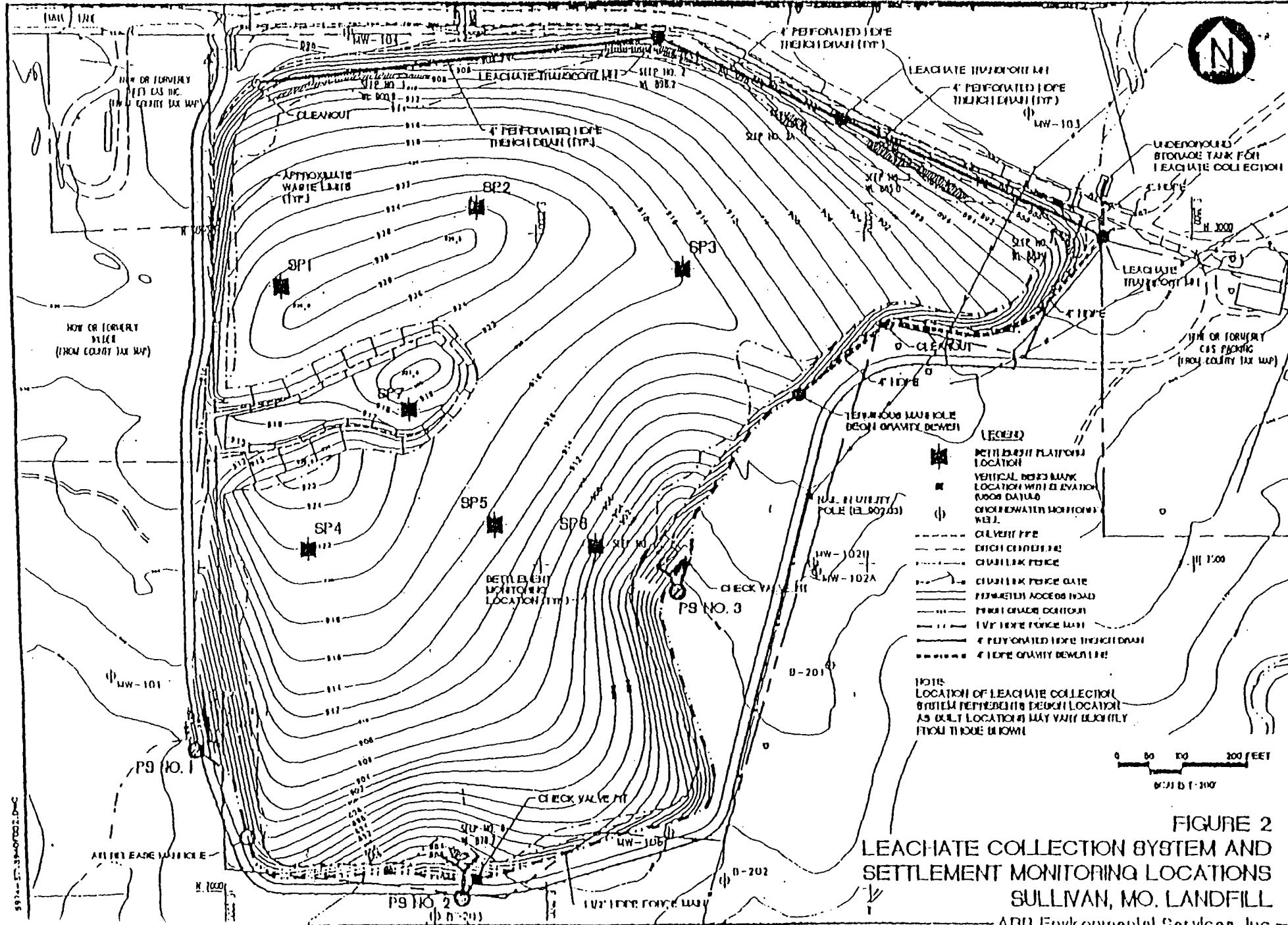


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

SULLIVAN LANDFILL

Inspection Checklist

Date: 3-12-2004

Weather Conditions:

Cloudy

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>OK</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	_____ _____ _____ _____
b. Current Level in Tank	_____ _____ _____ _____
c. Pump Sta. #1 Operational	_____ _____ _____ _____
d. Pump Sta. #2 Operational	_____ _____ _____ _____
e. Pump Sta. #3 Operational	_____ _____ _____ _____
4. Date of Last Grass Mowing	<u>July 2003</u>

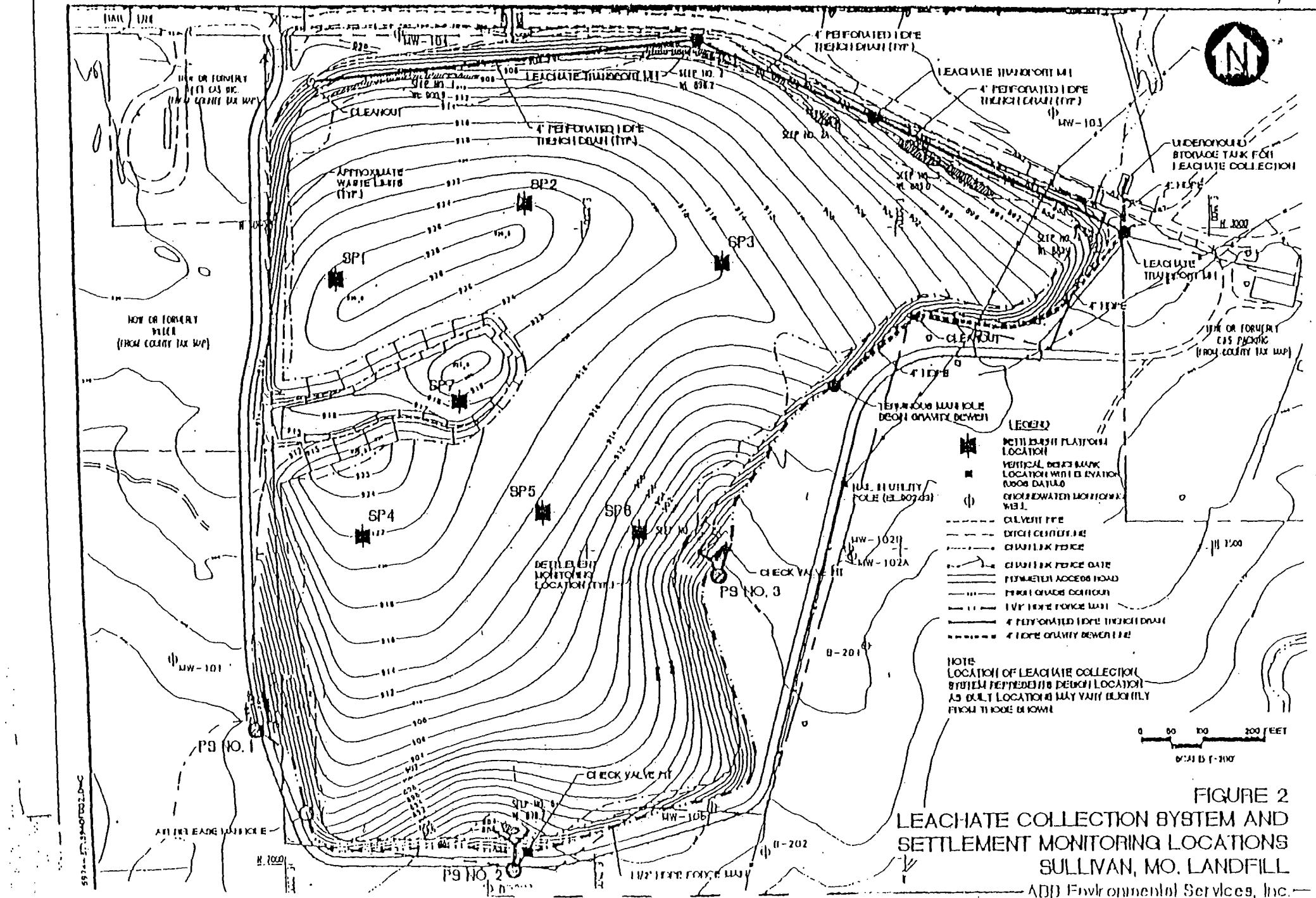
SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

Bob Hahn



SULLIVAN LANDFILL

Inspection Checklist

Date: 6 - 4 - 2004Weather Conditions: Clear

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>OK</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	<u> </u>
b. Current Level in Tank	<u> </u>
c. Pump Sta. #1 Operational	<u> </u>
d. Pump Sta. #2 Operational	<u> </u>
e. Pump Sta. #3 Operational	<u> </u>
4. Date of Last Grass Mowing	<u>July 2003</u>

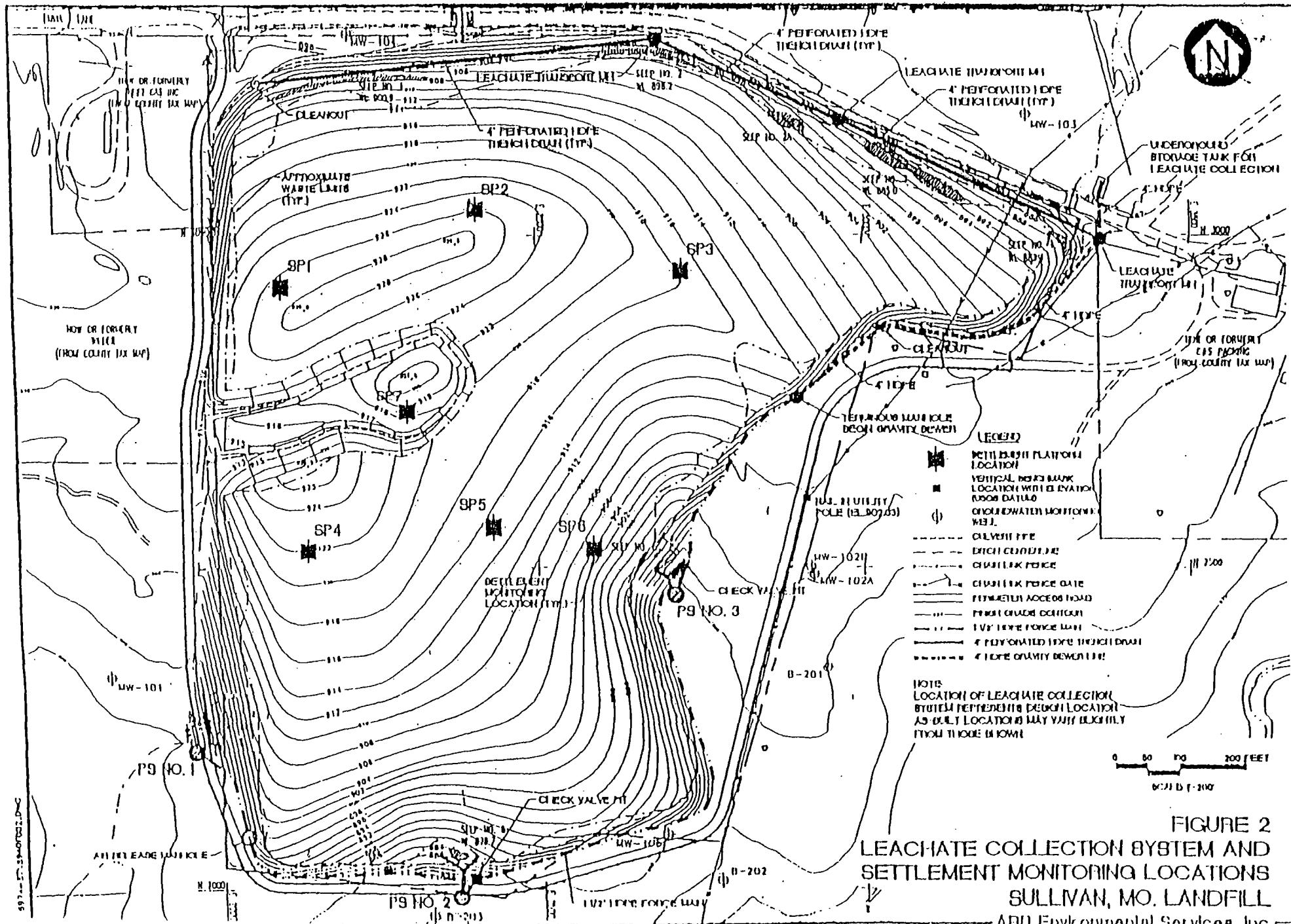
SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

BBB Zeh



SULLIVAN LANDFILL

Inspection Checklist

Date: 9-10-2004Weather Conditions: ClearITEM DESCRIPTIONCOMMENT

1. Site Security

- a. Gates Closed/Locks Secure
- b. Fence/Warning Signs Secure
- c. Evidence of Site Vandalism

OK
OK
OK

2. Erosion Control

- a. Cap Sideslopes Intact (no erosion)
- b. Signs of Burrowing Animals
- c. Emma Lane Culverts Free of Sediment/Debris
- d. Drainage Ditches Free of Debris

OK
OK
OK
OK

3. Leachate Collection

- a. Latest Volume and Date Removed from Tank
- b. Current Level in Tank
- c. Pump Sta. #1 Operational
- d. Pump Sta. #2 Operational
- e. Pump Sta. #3 Operational

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4. Date of Last Grass Mowing

July 2003

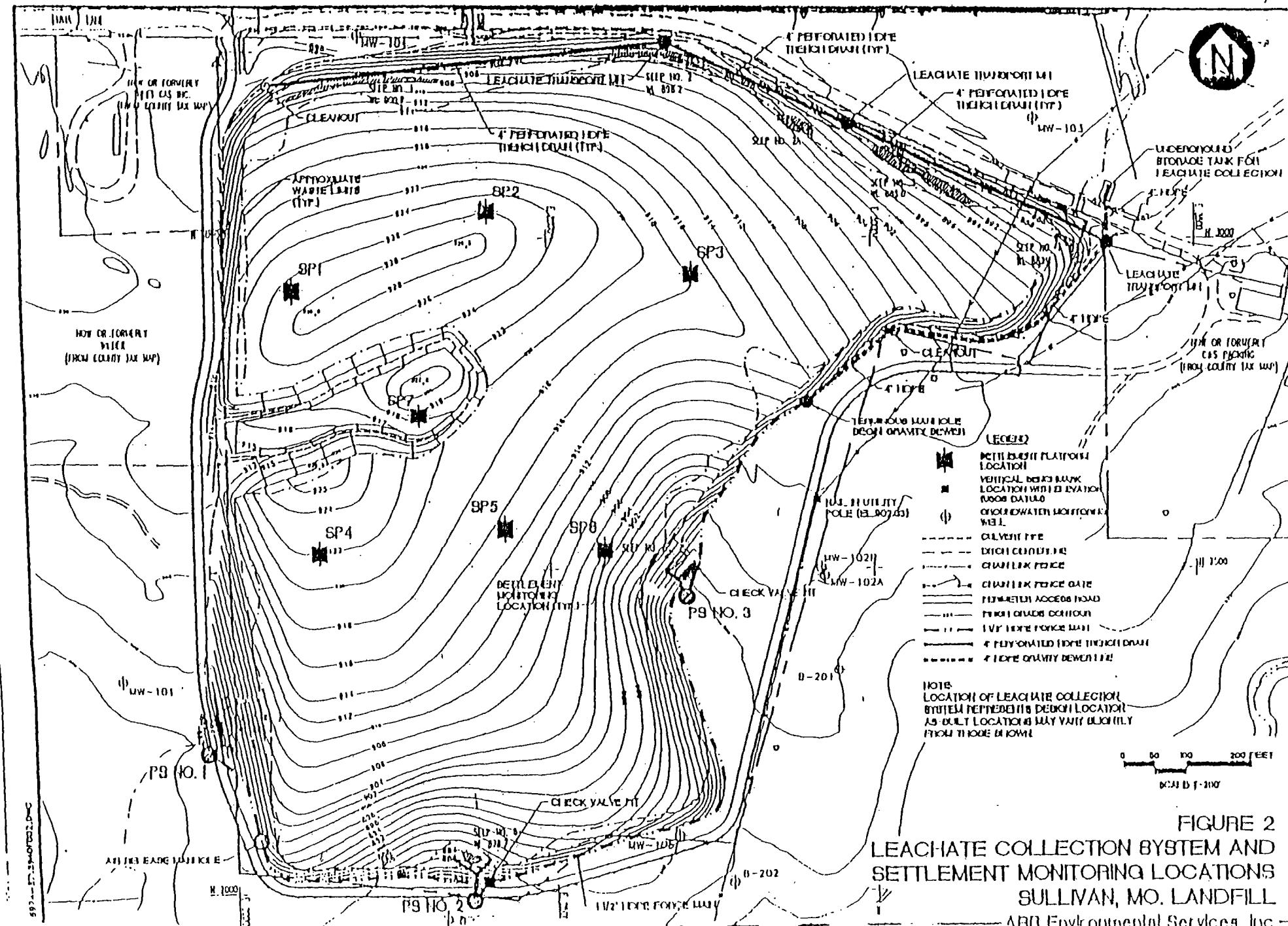
SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

B.D. Hall



SULLIVAN LANDFILL

Inspection Checklist

Date: 12-18-2004

Weather Conditions:

Rain & Cloudy

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>Some signs of animals</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	<u></u>
b. Current Level in Tank	<u></u>
c. Pump Sta. #1 Operational	<u></u>
d. Pump Sta. #2 Operational	<u></u>
e. Pump Sta. #3 Operational	<u></u>
4. Date of Last Grass Mowing	<u>Aug 2004</u>

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

2-B Put out some Peanuts with match

Inspected by:

Bob Hahn

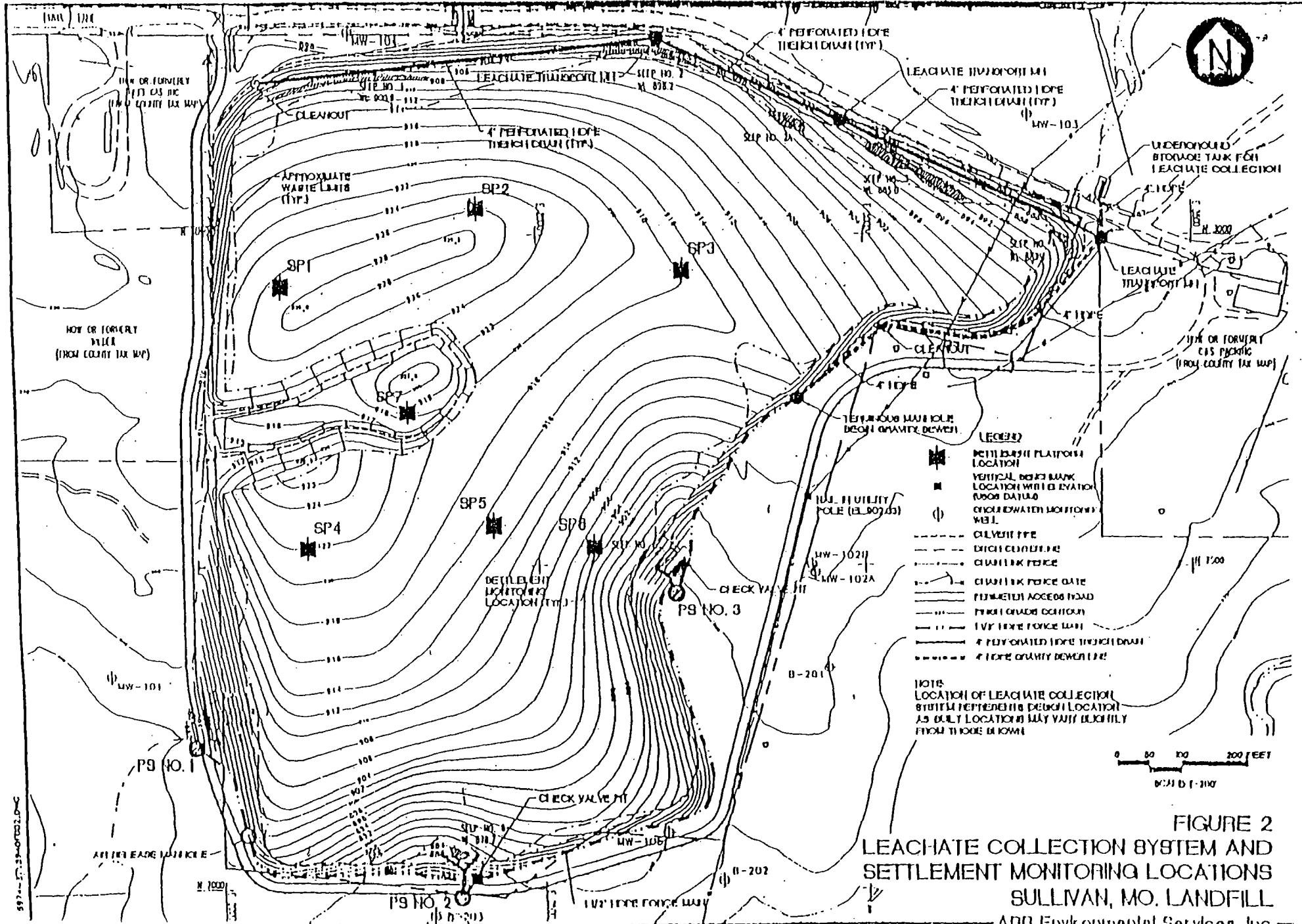


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Franklin County (SW)
Sullivan Sanitary Landfill



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

April 12, 2005

Mr. Tom Harman, City Administrator
Sullivan City Hall
210 West Washington
Sullivan, MO 63080

Dear Mr. Harman:

Enclosed is a checklist of an inspection conducted at the City of Sullivan Sanitary Landfill on April 5, 2005, by Lei Hou of my staff. Representing the Sullivan Sanitary landfill was Mr. Tom Harman. The inspection was performed to assess compliance with the Missouri Solid Waste Management Law and Regulations.

No violations were noted during the inspection. Thank you for your cooperation. If you have any questions or comments, please contact Ms. Hou at the St. Louis Regional Office, 7545 South Lindbergh Blvd., Suite 210, St. Louis, MO 63125, phone number 314-416-2960.

Sincerely,

ST. LOUIS REGIONAL OFFICE


Mohamad Alhalabi, P.E.

Regional Director

MA/LH/jh

LH

Enclosure: Inspection Checklist

c: SWMP
Dave Mosby, HWP-Superfund Section



MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
CLOSED LANDFILL INSPECTION CHECKLIST

TYPE OF INSPECTION ►

3

I. GENERAL INFORMATION

DATE OF INSPECTION <i>4/5/2005</i>	FACILITY NAME <i>Sullivan Sanitary Landfill</i>	
OWNER <i>City of Sullivan</i>	COUNTY <i>Franklin</i>	PERMIT NUMBER <i>107118/107103</i>
MAILING ADDRESS <i>210 West Washington</i>	CITY <i>Sullivan</i>	STATE <i>MO</i> ZIP CODE <i>63080</i>
DATE OF CLOSURE <i>November 15, 2000</i>	TEMPERATURE/WEATHER <i>70°F/ cloudy</i>	

II. INSPECTION CHECKLIST – Check all sections S = Satisfactory U = Unsatisfactory or N = Not Applicable
[DLF = cite for demolition waste landfill; ULF = cite for utility waste landfill]

S	U	N	
			<u>10 CSR 80-2.030</u> SOLID WASTE DISPOSAL AREA CLOSURE, POST-CLOSURE CARE and CORRECTIVE ACTIONS PLANS and PROCEDURES
1.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(3)
2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(4)(A)3E
3.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(4)(A)3F
			<u>10 CSR 80-3.010</u> DESIGN AND OPERATION
4.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(8)(C)1
5.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(9)(C)1
6.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(9)(C)2
7.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(11)(C)1D
8.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(14)(C)1
9.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(14)(C)2A
10.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(14)(C)2B
11.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(17)(C)7
12.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(17)(C)8
13.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(17)(C)9

III. REMARKS – All blocks marked U (Unsatisfactory) or N (Not Applicable) require a written explanation.

The Landfill was very well maintained. The city of Sullivan did an internal inspection once every month.

SIGNATURE OF INSPECTOR

Rei Hoss

OFFICE

St. Louis Regional Office

SULLIVAN LANDFILL

Inspection Checklist

Date: 3-3-2006

Weather Conditions: Clear

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>OK</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	<u> </u>
b. Current Level in Tank	<u> </u>
c. Pump Sta. #1 Operational	<u> </u>
d. Pump Sta. #2 Operational	<u> </u>
e. Pump Sta. #3 Operational	<u> </u>
4. Date of Last Grass Mowing	<u>Sept 2006</u>

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

Bob Hale

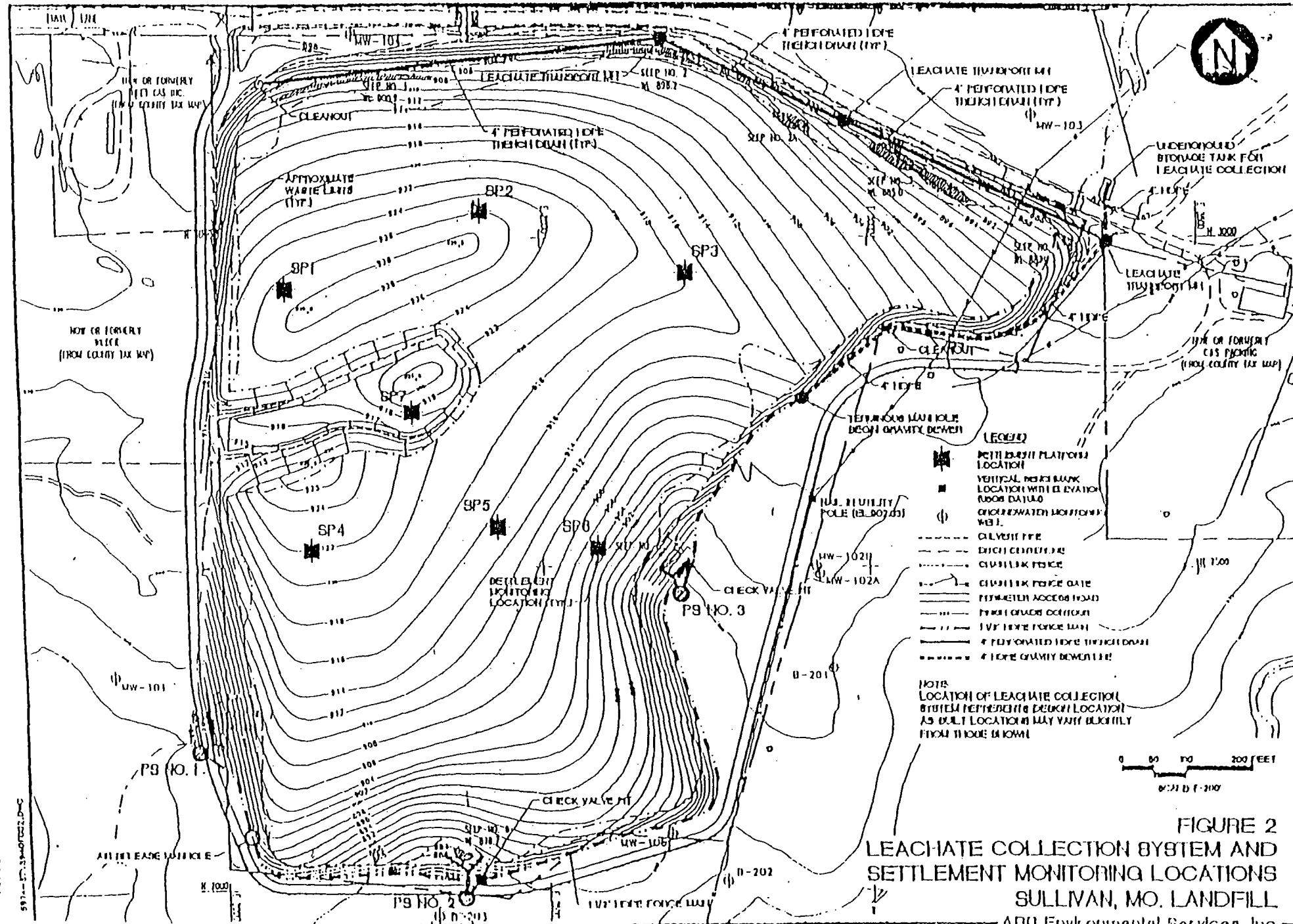


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

SULLIVAN LANDFILL

Inspection Checklist

Date: 12-1-2005Weather Conditions: Very ColdITEM DESCRIPTION COMMENT

1. Site Security

- a. Gates Closed/Locks Secure
- b. Fence/Warning Signs Secure
- c. Evidence of Site Vandalism

OKOKOK

2. Erosion Control

- a. Cap Sideslopes Intact (no erosion)
- b. Signs of Burrowing Animals
- c. Emma Lane Culverts Free of Sediment/Debris
- d. Drainage Ditches Free of Debris

OKOKOKOK

3. Leachate Collection

- a. Latest Volume and Date Removed from Tank
- b. Current Level in Tank
- c. Pump Sta. #1 Operational
- d. Pump Sta. #2 Operational
- e. Pump Sta. #3 Operational

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4. Date of Last Grass Mowing

Sept 2005

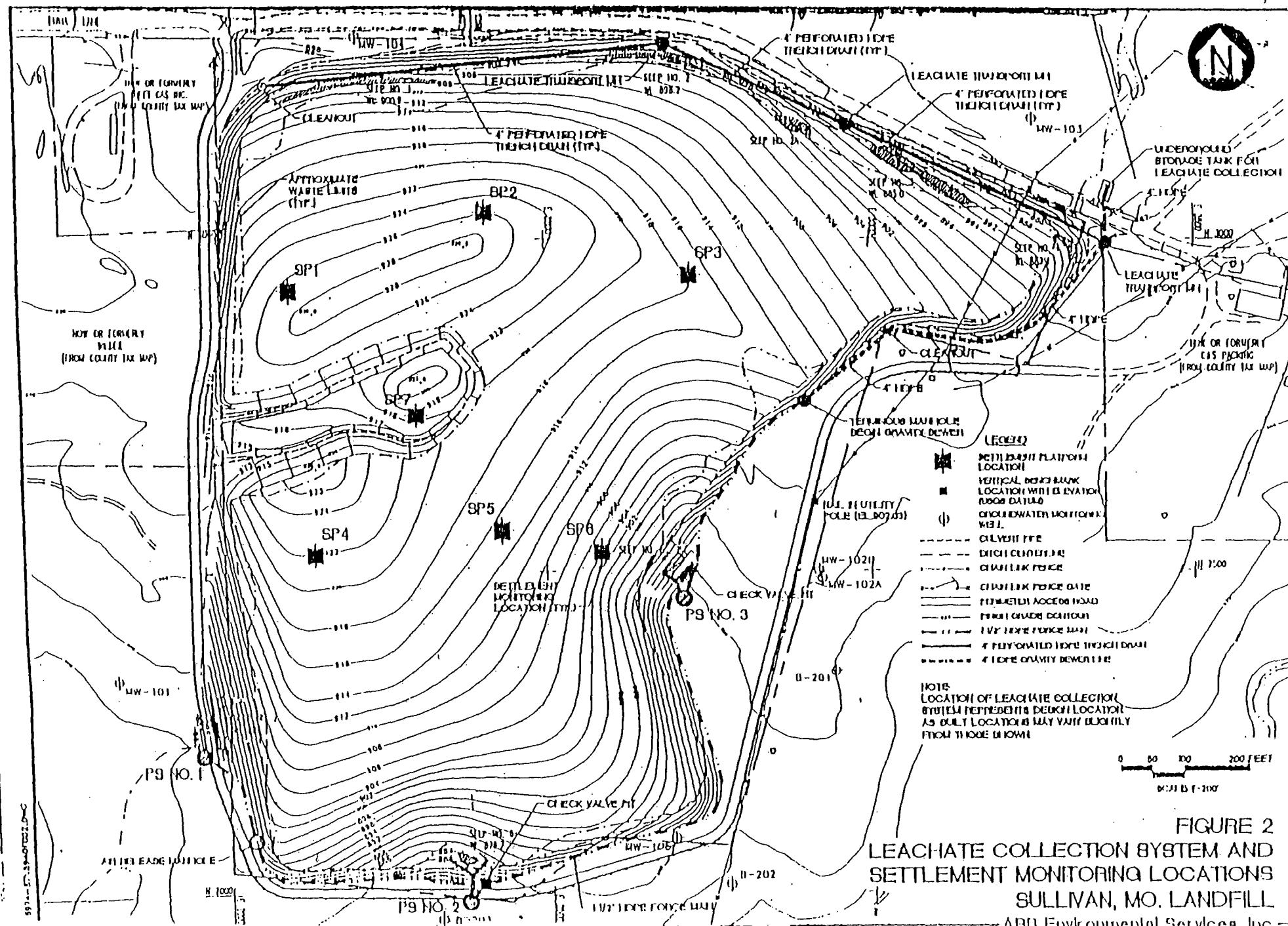
SULLIVAN LANDFILL

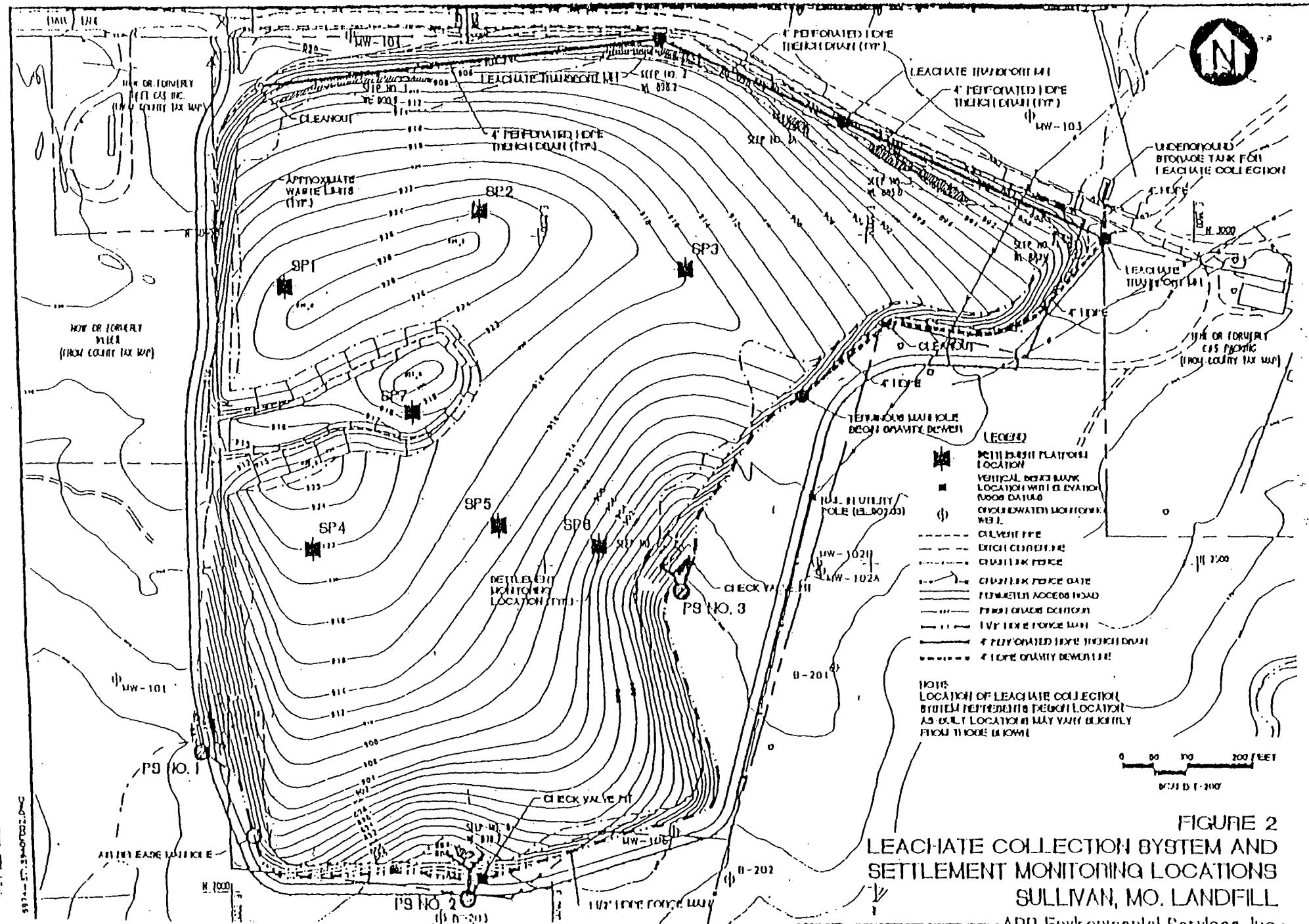
Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

BDO Hall





SULLIVAN LANDFILL

Inspection Checklist

Date: 7-23-2005Weather Conditions: RainITEM DESCRIPTION COMMENT

1. Site Security

- a. Gates Closed/Locks Secure
- b. Fence/Warning Signs Secure
- c. Evidence of Site Vandalism

OKOKOK

2. Erosion Control

- a. Cap Sideslopes Intact (no erosion)
- b. Signs of Burrowing Animals
- c. Emma Lane Culverts Free of Sediment/Debris
- d. Drainage Ditches Free of Debris

OKOKOKOK

3. Leachate Collection

- a. Latest Volume and Date Removed from Tank
- b. Current Level in Tank
- c. Pump Sta. #1 Operational
- d. Pump Sta. #2 Operational
- e. Pump Sta. #3 Operational

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4. Date of Last Grass Mowing

Sept 2005

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK Starting to Need Painted</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK some structures Need Painted</u>
9. Miscellaneous	<u> </u> <u> </u> <u> </u>
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

Bob Dahl

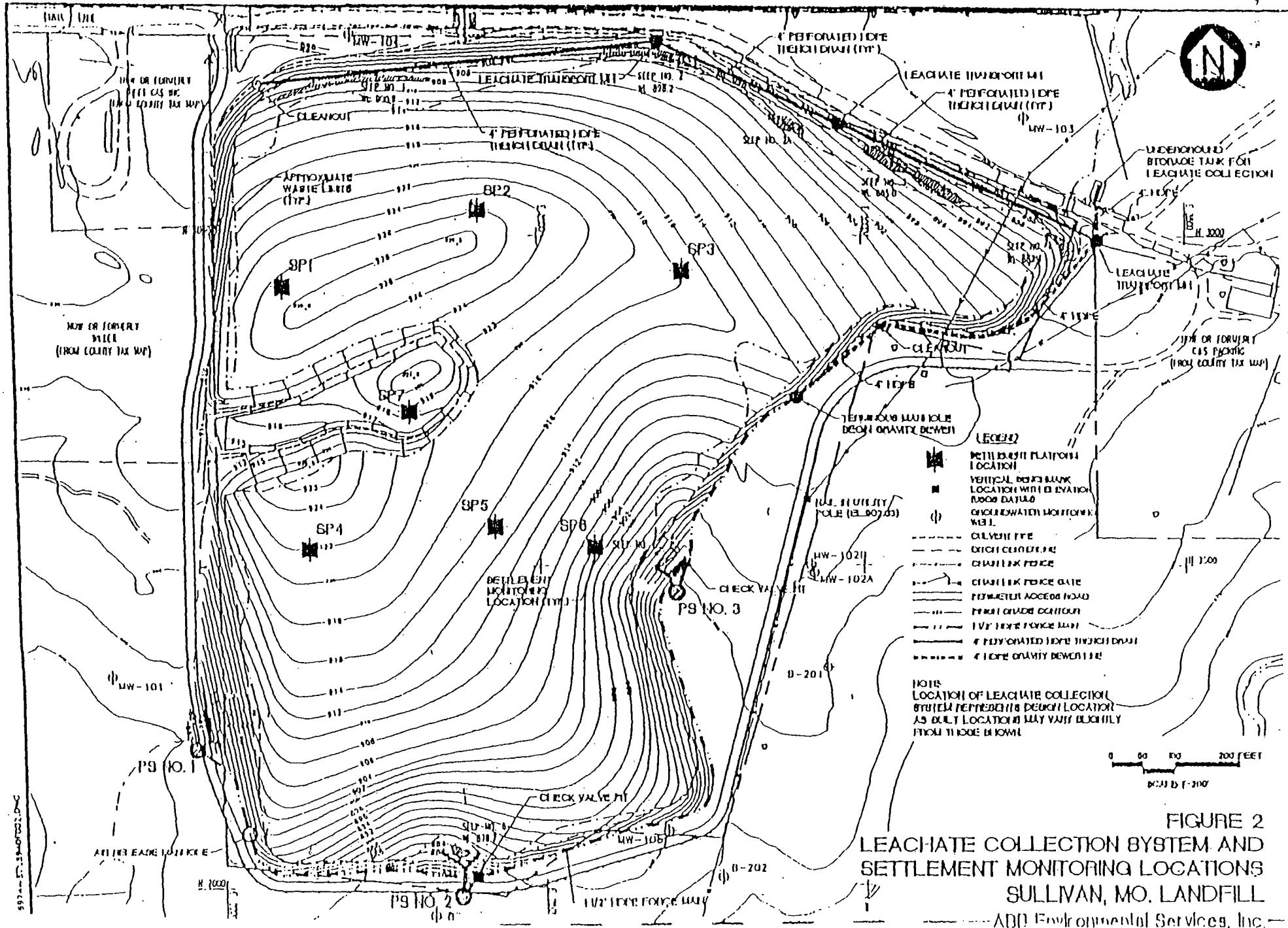


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

SULLIVAN LANDFILL

Inspection Checklist

Date: 6 - 9 - 2005

Weather Conditions: Clear

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
1. Site Security	
a. Gates Closed/Locks Secure	<u>OK</u>
b. Fence/Warning Signs Secure	<u>OK</u>
c. Evidence of Site Vandalism	<u>OK</u>
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	<u>OK</u>
b. Signs of Burrowing Animals	<u>Small amount of digging</u>
c. Emma Lane Culverts Free of Sediment/Debris	<u>OK</u>
d. Drainage Ditches Free of Debris	<u>OK</u>
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	<u></u>
b. Current Level in Tank	<u></u>
c. Pump Sta. #1 Operational	<u></u>
d. Pump Sta. #2 Operational	<u></u>
e. Pump Sta. #3 Operational	<u></u>
4. Date of Last Grass Mowing	<u>Aug 2004</u>

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

*Put out Peanuts & Close Holes That Had
No sign of activity.*

Inspected by:

B M Dahl

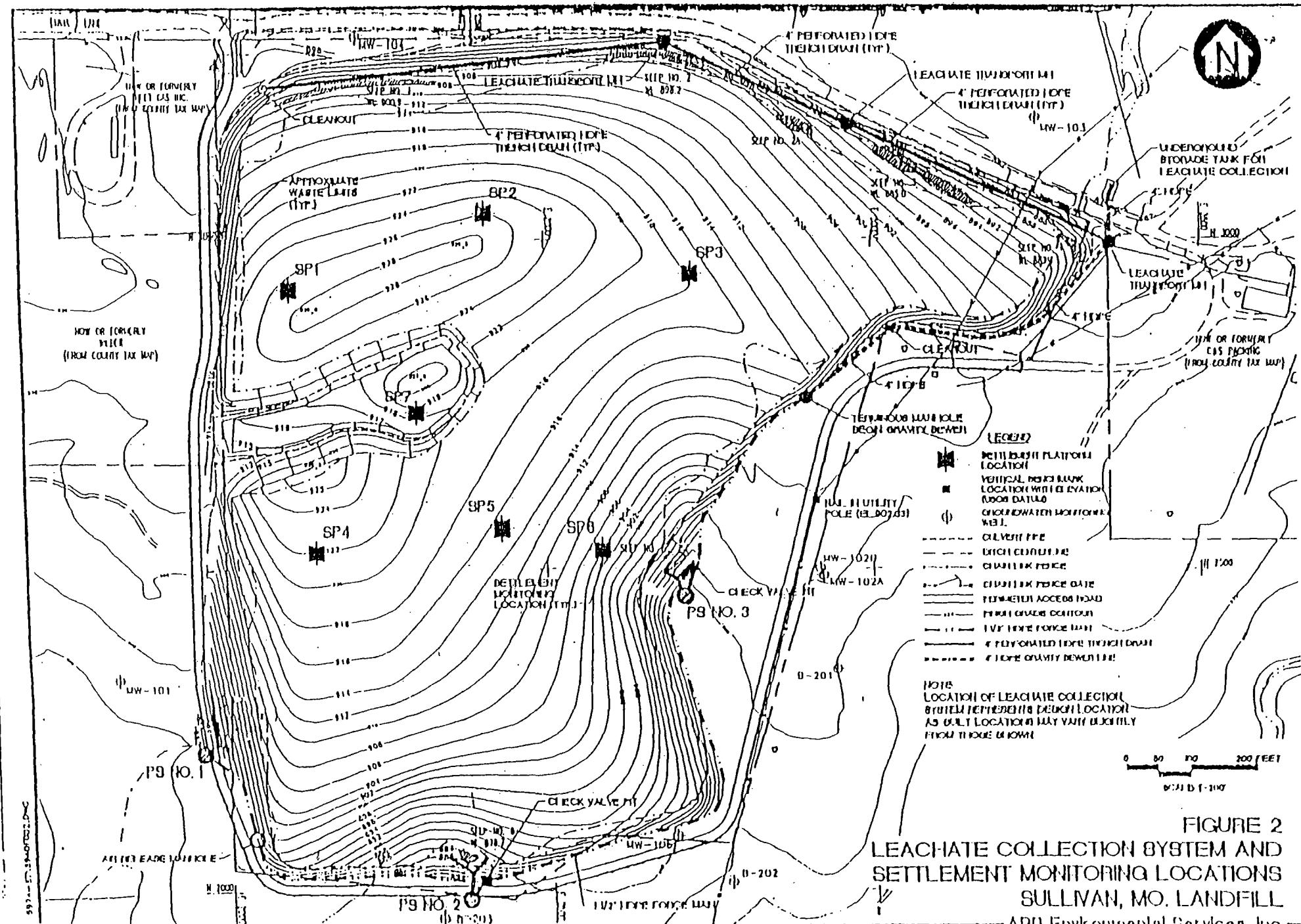


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

SULLIVAN LANDFILL

Inspection Checklist

Date: 3 - 25 - 2005Weather Conditions: Windy ClearITEM DESCRIPTION COMMENT

1. Site Security

- a. Gates Closed/Locks Secure
- b. Fence/Warning Signs Secure
- c. Evidence of Site Vandalism

OKOKOK

2. Erosion Control

- a. Cap Sideslopes Intact (no erosion)
- b. Signs of Burrowing Animals
- c. Emma Lane Culverts Free of Sediment/Debris
- d. Drainage Ditches Free of Debris

OKOKOKOK

3. Leachate Collection

- a. Latest Volume and Date Removed from Tank
- b. Current Level in Tank
- c. Pump Sta. #1 Operational
- d. Pump Sta. #2 Operational
- e. Pump Sta. #3 Operational

X

4. Date of Last Grass Mowing

Aug 2004

SULLIVAN LANDFILL

Inspection Checklist (continued)

<u>ITEM DESCRIPTION</u>	<u>COMMENT</u>
5. Settlement Platform Risers (7) Undisturbed	<u>OK</u>
6. Gas Vent Risers (16) Undisturbed	<u>OK</u>
7. Perimeter Drain Outlets Clear	<u>OK</u>
8. Groundwater Monitoring Wells (9) Undisturbed	<u>OK</u>
9. Miscellaneous	
10. Describe any specific actions taken to address concerns listed above:	

Inspected by:

BDB Hah

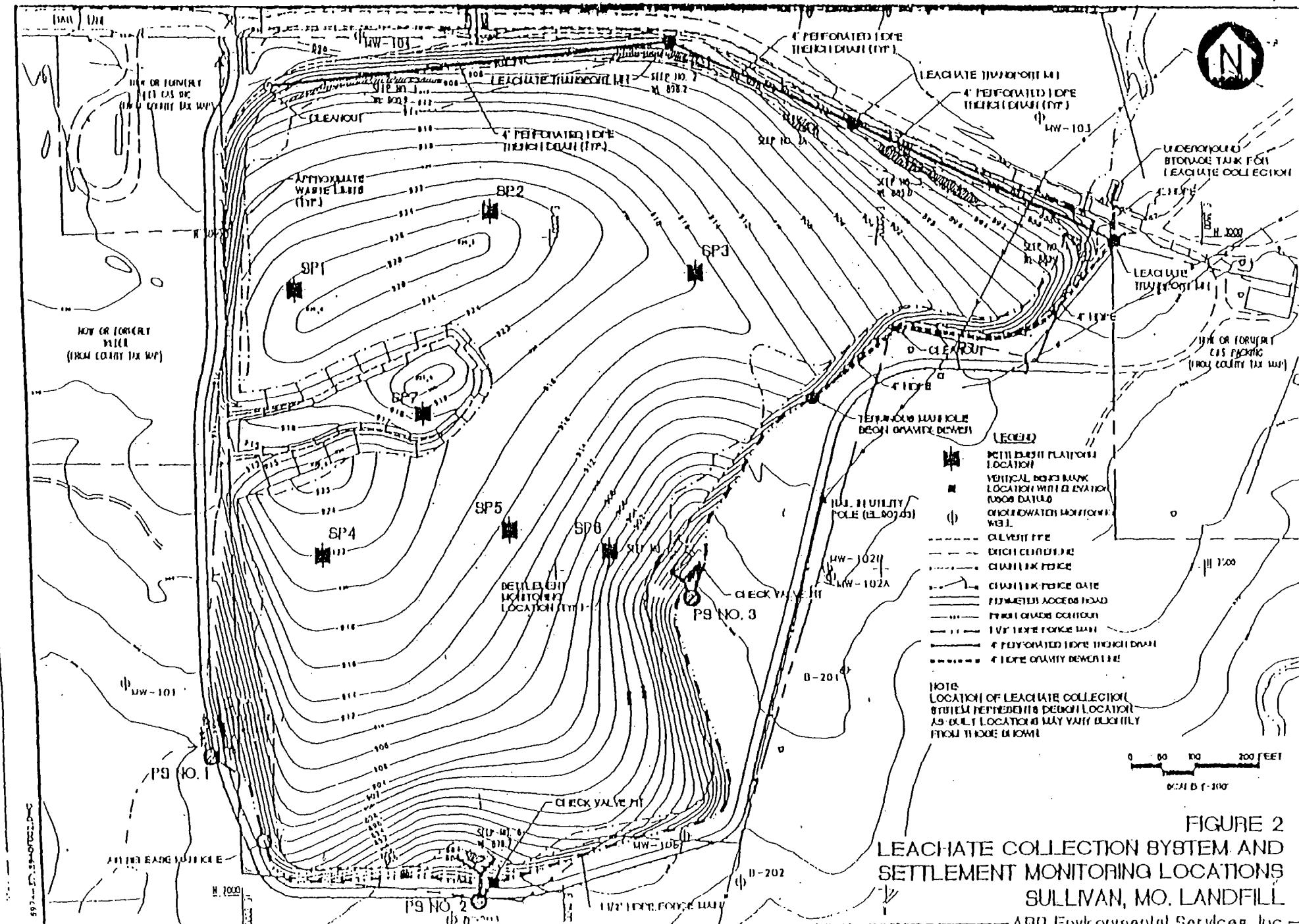


FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL